Five-Year Report on the

Status of Forestry

April 1996 - March 2001

Protecting & Managing *our Future*

Manitoba Conservation

102-05536/

To His Honour
The Honourable Peter M. Liba
Lieutenant Governor of Manitoba

Your Honour:

As the Minister of Conservation, I am pleased to present the Five Year Report to the Legislature on the Status of Forestry for the period ending March 31, 2001. During the past five years the forest sector has experienced significant changes, as the province continues to evolve toward ecosystems based forest management.

Manitoba worked with forest sector partners to conduct a pilot project for managing ecosystems on the east side of Lake Winnipeg. The results of this project will provide important background information for the Province's broad area planning process currently underway in eastern Manitoba.

Manitoba's forest industry has undergone significant change that expanded and strengthened our forest sector. Tembec Inc. completed a de-inking plant to increase the use of recycled fibre, while Tolko Industries and Spruce Products Limited undertook significant upgrades of their sawmill facilities.

First Nations communities united to enter an historic partnership project with Tembec Inc. to develop a sawmill project. This represents a new era in forestry as local First Nations seek to become major participants in this industry.

Manitoba continued to build partnerships with industry, academic institutions and other agencies to increase of our knowledge of forests, to build a new forest inventory, to increase aboriginal participation in the forest sector and to complete a network of protected areas.

This Five Year Report on the Status of Forestry identifies the milestones that shaped the forest sector over the past five years, reviews the department's forest management programs and identifies future challenges for the department.

Yours truly,

Oscar Lathlin
Minister

To the Honourable Oscar Lathlin
Minister of Conservation

Sir:

I am pleased to submit the fourth Five Year Report to the Legislature on the Status of Forestry for the period April 1, 1996 to March 31, 2001.

The report provides an overview of the milestones in forestry over the past five years, the status of our forest resources and an assessment of the department's forest management programs and identifies challenges for the forest sector.

Yours truly,

Norman Brandson
Deputy Minister

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I - Introduction

In the five-year reporting period April 1996 to March 2001, Canada's forest sector has experienced significant change. Across the country, governments and forest industry have continued to evolve toward sustainable forest management through expanding and improving forest inventories; exploring ways to increase Aboriginal participation in the forest sector; and working toward a network of protected areas. They also began discussions in anticipation of the end of the Softwood Lumber Agreement with the U.S. that occurred March 31, 2001.

Specific industry developments reported in the following pages include: Pine Falls Paper Company Limited's completion of its de-inking plant; Tembec Inc.'s purchase of Pine Falls Paper Company, and Tolko Industries' sawmill upgrade.

In Manitoba increased interest by First Nations communities resulted in discussions between Tembec Inc. (formerly Pine Falls Paper) and several First Nations communities to develop a partnership sawmill project.

Late in the reporting period, Manitoba's three forest management licence holders had taken the first steps toward certification of their operations and products. Certification confirms timber is derived from sustainably managed forests. Forest products certification has become a significant trend in the sector.

Douglas Marsh in Spruce Woods Provincial Forest was designated a protected area under The Forest Act

Manitoba initiated new forest inventory and wood supply analysis to determine annual allowable harvest levels. Forestry Branch and Louisiana-Pacific Canada Ltd. (L-P) conducted a new Forest Lands Inventory pilot project in the Duck and Porcupine Mountains.

Manitoba's Protected Areas Initiative has set aside 53,650 square kilometres since the program began in the early 1990s. Protected areas prohibit industrial activities such as logging or mining. Much of the early work on this program was in non-productive forest areas. By the end of the reporting period, focus had moved to areas of forestry activity.

A pilot project on the east side of Lake Winnipeg was conducted as a first step to implementing *Manitoba's Forest Plan...Towards Ecosystems Based Management*. The forest plan is a long-term framework to create ecosystems-based forest management. The project described the ecological characteristics of the eco-region and tested public participation models. To further increase public participation in resource use and forest planning, Manitoba Conservation began a broad-area planning process on the east side of Lake Winnipeg.

In 1999, Manitoba's Natural Resources Department was amalgamated with Environment and renamed Manitoba Conservation. New departmental priorities emerged including northern economic development, increased Aboriginal participation in resource management and an ecosystems-based approach to forest resource inventory.

Concurrent with the creation of Manitoba Conservation, Forestry Branch reviewed its mandates and aligned resources with departmental priorities. This review was initiated, in part, to address evolving public expectations, technological advances in forest management and new industry needs. The Forestry Branch review was still in progress at the end of the reporting period.

Forestry Branch initiated a world wide Web site project in 1996. It has since expanded its site to better reflect the branch's mandates for forest management and to meet client needs. Expansion and refinement of the site continues. The site can be viewed at www.gov.mb.ca/natres/forestry/

Legislation and Policy

Two new pieces of legislation were introduced to Manitoba's urban forest resources. An updated version of *The Dutch Elm Disease Act* and its Regulation was approved in 1998, as was the Arborists Licensing Regulation introduced in the spring of 2001.

The new *Dutch Elm Disease Act* replaces the previous act passed in 1981, and aims to strengthen the delivery of Dutch elm disease (DED) management programs in the province. The new act introduced improved management measures and higher penalties for infractions. It also added more appropriate definitions of enforcement procedures against this lethal elm tree disease.

The Arborists Licensing Regulation, which falls under *The Plant Pests and Diseases Act*, introduces new licensing requirements for tree care workers in Manitoba. The new qualifications to obtain tree care licence in this province reflect the standards of skill and knowledge now commonly accepted in other parts of North America. This regulation replaces the old Manitoba Tree Pruners Regulation, last amended in 1987.

II - Forestry Programs

As part of administering *The Forest Act* and *The Dutch Elm Disease Act* Manitoba Conservation oversees delivery of forestry programs by the department and partner agencies. This section reports on the activities of these programs during the five-year period.

Forest Inventory and Resource Analysis

Manitoba has committed to sustainable development and ecosystem based approaches for forest management. Manitoba Conservation has adopted new methods to evaluate forest resources that account for the increasingly complex issues associated with managing the forest resources. This is accomplished through an inventory of the forest resource province-wide. To determine volumes and distribution of productive timber, growth rates and depletion of the resource through extraction and natural events is also analyzed.

Forest Inventory

Manitoba's existing forest resource inventory process was developed in the mid-1960s, primarily to determine an annual allowable harvest to help establish and regulate the forest industry. The inventory has also served a variety of land use and resource planning needs (e.g. forest, wildlife, parks and fisheries management) over the years.

While timber-focused, the current forest resource inventory was adequate for its original purpose. Current resource management issues now require a broader base of inventory information because of society's demands for sustainable forest management and land use planning.

On May 1, 1998, the province announced a move toward a new forest inventory process in partnership with the forest sector, other existing users and potential users. The Forest Lands Inventory Technical Advisory Committee, with representatives from Manitoba Conservation (MC) and industry, was formed to design a new forest inventory for Manitoba. The technical committee prepared a December 18, 2000 report on requirements for a new forest lands inventory. It recommended that testing and implementation of the proposed approaches should be conducted as a pilot project.

In 2000, a new pilot project was initiated as a partnership between the Forestry Branch and L-P. L-P requires a new inventory to develop its next long-term forest management plan. The forest lands inventory pilot project is continuing on the Duck and Porcupine Mountains, Forest Management Units 13 and 14 respectively, with completion targeted for the end of 2002. In addition to supporting L-P's forest planning needs, the pilot allows the province to assess the long-term wood supply for this part of western Manitoba. It will also provide the basis to test the methodology for a province-wide new forest lands inventory process and for program cost-sharing.

Resource Analysis

As part of its forest management stewardship responsibilities, the Forestry Branch calculates and manages annual allowable harvest levels for the entire province. Since the last five-year report, the forest industry in Manitoba has expanded and additional demands for the forestry land base have affected resources allocations. This has increased the need for the branch to perform allowable harvest determinations quickly and efficiently.

In 1998, the branch commissioned an external review of the existing annual allowable harvest determination process and has since adopted many of the key recommendations from the report. Since its completion, the branch has adopted a more contemporary method of estimating wood fibre supply through the use of forest modelling software. The branch has begun using this approach to determine sustainable wood supply in portions of the Interlake and Lake Winnipeg East Forest Sections. These new figures will be reflected in the next five-year reporting period. Therefore, the annual allowable harvest levels reported in this document are the same as the previous reporting period.

The Resource Analysis Program is also responsible for developing and maintaining a digital database and geographic information system (GIS) for the provincial forest resource inventory. The branch currently distributes digital and hard copy forest inventory information to industry, stakeholders and public. The GIS server was replaced and the branch updated several software applications and related workstations.

Growth and Yield

The Forestry Branch's Growth and Yield Program has been accelerated to support inventory and resource analysis programs as demands for wood supply information increase.

Growth and yield are critical components of wood supply analysis and long-range sustained yield estimates. The program employs several methodologies to measure forest growth through a variety of field programs. The information gathered from these programs supports the development of yield equations. They in turn, estimate and project forest productivity over time.

During the current reporting period, the Growth and Yield Program developed new single tree volume equations for the province. The program was enhanced through joint contracts with industry and the University of Winnipeg to develop ecologically-based tree taper equations to be used in future forest growth models. The program has undertaken comprehensive studies into stand growth, structure and volume recovery in relation to the provincial use standards.

Manitoba Silviculture Information System (MBSIS)

The Manitoba Silviculture Information System tracks harvest and renewal activities. The tabular portion of this system was implemented by Manitoba Conservation in 2000. MBSIS software provides each Manitoba Conservation regional office with a common system and allows them two-way access to the Forestry Branch central server in Winnipeg. These records will be used to report on current and past activities, accurately describe current conditions and determine the regeneration status of the forest.

Forest Planning and Practices

Many of the forest management responsibilities for the provincial Crown forest land base have been assigned to companies holding Forest Management Licences, as part of the tenure arrangement. To ensure management activities are consistent across the province, Manitoba Conservation provides direction to these companies on planning, management and practises.

Forest Planning

Forest Management Plans

Companies that hold or are seeking a Forest Management Licence are required to develop long-term forest management plans under *The Forest Act*. The forest management plan must be developed in accordance with current guidelines provided by Manitoba Conservation. The plan proposes long-term timber harvesting, access development and forest renewal activities throughout the Forest Management Licence Area. The forest management plan must also describe the forest resource values involved, planning framework and consultation process, preferred management approach, operating practices, and contain a sustainable wood supply analysis.

During the review period three Forest Management Plans were in effect in Manitoba. When the Pine Falls Paper Company's 1991-1998 Forest Management Plan expired, Manitoba Conservation approved a two-year plan to cover 1999-2000 operations. L-P's first forest management plan was approved for the period 1996-2005. The Repap 1997-2009 Forest Management Plan was approved by Manitoba Conservation, and assumed by Tolko Industries Ltd. when it purchased Repap's Manitoba operations.

Forest Management Plan Guidelines

Planning guidelines provide direction for long-term forest management plans that are consistent with Manitoba's commitment to sustainable development and an ecosystems-based approach to forest management. A document titled Interim Submission Guidelines For Ten-Year Forest Management Plans was developed in 1996 by the Forestry Branch. Forest management plan submission guidelines are updated periodically to reflect current policy, practices and standards for sustainable forest management. The most recent update, in 1999, is the document Ten-Year Forest Management Plan Submission Guidelines, which was developed specifically to provide more contemporary direction to Tembec.

Annual Operating Plans

Annual operating plans are developed within the framework of an approved long-term forest management plan. During the review period, the department reviewed and approved all company plans. Pre-plan mitigation of concerns (i.e. addressing potential concerns prior to submitting a plan) has been introduced, and has created a more efficient approval process.

Forest Practices

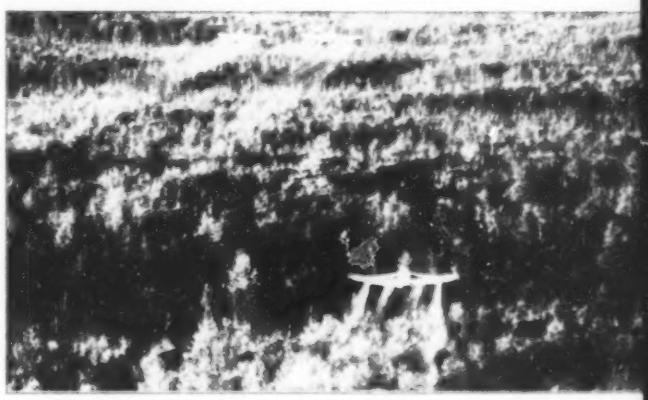
The Forest Practice Initiative of Manitoba Conservation was started during the review period to provide consistent direction for forest managers, operators, natural resource officers and auditors. The goal of the initiative is to help these people plan, conduct or assess forestry activities. Another goal is to advance best practices through guidelines and standards for sustainable forest management activities in Manitoba. These are developed co-operatively with industry to provide further direction and/or create a link between legislative requirements and operational practice.

Forest Health

Part of Manitoba Conservation's mandate for forestry is to monitor forest insects and diseases to anticipate and manage outbreaks that could significantly impact Crown or private forest lands.

Spruce Budworm Management Strategy

During the reporting period, the existing spruce budworm infestation expanded from 70,240 hectares in eastern Manitoba in 1996, to 80,500 hectares in eastern and northwestern Manitoba in 2000. To address this and its economic impact on Manitoba's timber supply, a four-year Spruce Budworm Management Strategy was implemented with emergency funding. The program surveyed the expanding infestation and prioritized the protection of approximately 18,000 hectares of forest area each year. The initial three years (1998-2001) fall within the current reporting period. From 1998 to 2000, 56,500 hectares of forest in eastern and northwestern Manitoba were protected through the aerial application of a biosynthetic molting hormone. The market value of the estimated 1.7 million cubic metres of wood protected by this program is estimated at $120 million per year.



Development of Pest Management Prescriptions

It is essential for the long-term viability of the forest industry to identify and mitigate pest problems. Over the long-term, the most effective pest control is prevention. Preventive management strategies can be developed from the pre-harvest and silviculture surveys to mitigate pest damage and reduce pest control costs in the future.

Monitoring major forest pests is a provincial responsibility. Major pest indentification at all stages of forest growth is important in reducing pest damage. Integration of forest health survey methodologies into three existing operational forest surveys (Pre-harvest, Regeneration and Free to Grow surveys) over the past five years has helped fulfill this mandate. Forest health follow-up assessments and pest-specific surveys evaluate potential losses. Detailed pest management prescriptions were developed with forest companies and local forest managers for stands identified as significant forest health concerns. Forest health information obtained from pre-harvest surveys was used to prioritize harvesting on both an area and stand basis which reduces current losses; or to take a preventive approach towards chronic pests of the site. Forest health information was also used to ensure unhealthy areas within a cut-block did not infect adjacent forests. This will better serve the objectives of both wildlife and forestry.

The pests most frequently detected in pre-harvest surveys include root/butt decays and dwarf mistletoes on conifers and white trunk rot, hypoxylon canker and poplar borer on hardwoods.

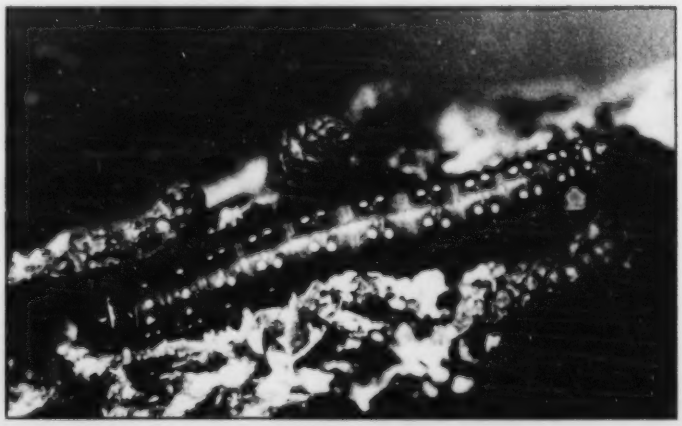
Spruce and Jack Pine Budworm

Spruce budworm significantly affects white spruce and balsam fir in Manitoba. The budworm larvae feed predominantly on the tree's current year shoots. Repeated feeding weakens and eventually kills the tree. During the reporting period, spruce budworm outbreaks occurred in eastern Manitoba, Spruce Woods Provincial Forest, Duck Mountain Provincial Forest and in northwestern Manitoba. The area of infestation has fluctuated from a low of 70,240 hectares in 1996 to a high of 113,418 hectares in 2000.

Since 1981, Manitoba has exclusively used biological insecticide products specific to the target pests. Operational insecticide applications for spruce budworm were undertaken each year of the reporting period. In 1997, the department replaced the bacterial insecticide Bacillus thuringiensis (Bt) with a biosynthetic insecticide found to be equally specific to target pests and more effective in controlling these populations. Generally, the insecticide application projects have reduced spruce budworm populations, preventing severe defoliation and widespread tree mortality in commercially valuable forests.

In 1999, experimental aerial insecticide applications for spruce budworm were done to compare three dosages of a biosynthetic molting hormone that initiates, but does not allow completion of the molting process in the spruce budworm caterpillar. Results indicated the optimal dosage to be used in instances where budworm larval densities are very high.

Trapping spruce budworm adult male moths using pheromones (chemical substances, e.g. the sexual attractants) was carried out in infestation areas of Forest Management License (FML) Area #1 throughout the reporting period, and in FML #2 from 1997 to 2000. The objective is to develop an early warning survey technique to detect spruce budworm outbreaks before they occur, or as an alternative to the egg mass densities defoliation prediction method. Statistical analysis indicated the two defoliation



Spruce Budworm *Photo: Canadian Forest Service*

prediction methods (moth capture and egg mass densities) were not significantly different in predicting moderate defoliation for the following year. However, the moth capture method was more accurate in predicting light defoliation, while the egg mass densities method was more accurate in predicting severe defoliation.

Jack pine budworm is the major defoliator of Manitoba's jack pine forests. The annual number of adult male moths has been monitored with pheromone-baited traps, at 12 permanent trapping locations, since 1985. This trapping method is being evaluated as an early warning method for outbreaks and as a supplemental technique to branch collecting and egg mass prediction of population levels. Populations of jack pine budworm in Manitoba continue to be endemic but moth numbers have increased within the last two years.

Dwarf Mistletoe

Lodgepole pine dwarf mistletoe, a parasitic plant, is the most significant jack pine disease in Manitoba. It causes growth loss, deformity and tree mortality. Approximately 71,000 hectares of mature Manitoba jack pine forests are currently infested. The volume loss in these mature infested forests was approximately 2,308,000 cubic metres. The area of infestation in young jack pine forests is unknown due to the difficulty in mapping it from the air.

Dwarf mistletoe management throughout the reporting period consisted of post-logging sanitation treatments, sanitation in juvenile stands and salvage harvesting. This was done predominantly in the Wabowden and Davidson Lake areas and in Belair Provincial Forest. Where possible, harvesting has been focused in infested stands as part of the ongoing management of this disease.

Eastern dwarf mistletoe is a significant black and white spruce disease in Manitoba. Although the area of infestation is currently unknown, the timber volume losses due to this disease are substantial in some areas of the province. In 1998-99 a volume-loss simulator model was developed for eastern dwarf mistletoe. Similar to an earlier model developed for dwarf mistletoe on jack pine, this model is to be used at the stand level to predict volume losses over time and to assist in making the best management decision for the stand given predicted losses. The information provided by the model allows decisions to be made as to the optimum timing for sanitation treatment and at what age to harvest the stand if losses to dwarf mistletoe exceed volume increment due to growth.

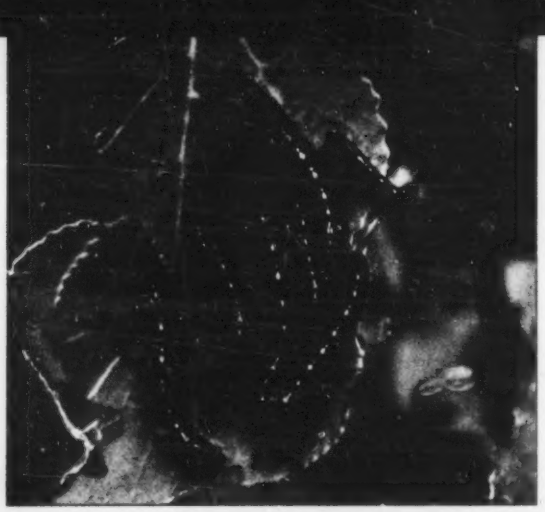
Forest Tent Caterpillar

The forest tent caterpillar is the most common insect defoliator of trembling aspen in Manitoba. In addition to aspen, it feeds on a number of other deciduous trees and shrubs.

Moderate to severe defoliation by forest tent caterpillar occurred in northwestern Manitoba from 1996 to 1999, particularly in The Pas, Flin Flon and Sherridon areas. In 2000, only scattered pockets of defoliation remained within this area of the province.

From 1996 to 1998 some isolated areas of forest tent caterpillar defoliation occurred in southern Manitoba. These localized outbreaks tended to subside after one or two years without enlarging and reaching epidemic proportions. However, in 1999, the size and frequency of these outbreaks increased, particularly in the eastern (Winnipeg to the Manitoba-Ontario border) and Interlake areas. In 2000, widespread moderate and severe defoliation occurred throughout much of Whiteshell,

Nopiming and Hecla Island provincial parks. Localized severe defoliation occurred throughout the municipalities of Whitemouth, Reynolds, Lac du Bonnet, Brokenhead, Ste. Anne, Springfield and Alexander. Localized moderate defoliation occurred throughout the Interlake area. Department staff provide advice to other agencies (e.g. municipalities, Manitoba Parks Branch) regarding anticipated outbreaks and management techniques.



Forest Tent Caterpillar *Photo: Canadian Forest Service*

Forest tent caterpillar outbreaks result in considerable growth loss. Up to 90 per cent growth reduction can occur during the second and third years severe defoliation. Tree mortality can occur if an outbreak lasts five to seven years or when factors such as drought stress or a late season defoliator causes a second defoliation in the same year.

Widespread tree mortality does not normally occur, since outbreaks generally last only three to four years. Therefore, Manitoba Conservation does not control defoliation in commercial forests.

White Trunk Rot of Trembling Aspen

White trunk rot is a fungal disease that causes advanced decay in aspen stems. This decay, which causes wood deterioration and renders it useless for forest products, is the most significant cause of aspen volume loss in Manitoba. With the establishment of FML #3, the construction of an oriented strandboard plant and a subsequent 450 per cent increase in aspen use, Forestry Branch initiated a survey in 1992. The survey assessed the volume loss attributed to advanced decay. During the reporting period, this survey was carried out in FMUs 10, 11 and 14. Based on the data analysis, a guide was developed to estimate volume deductions for white trunk rot. This allows for more accurate volume calculations of healthy timber to be made.

Root and Butt Rot

Severe root disease was frequently identified on upland black spruce sites during pre-harvest surveys in the Mountain Forest Section. An intensive root-disease ground survey was carried out in the autumn of 2000. The survey was to determine the current extent of the root disease and timber volume loss. It was also to project losses over the next several years. The information was used to minimize volume loss by focusing harvest activity in the most severely infested areas.

Dutch Elm Disease Management

DED is a non-native fungal disease of elm trees. This disease is fatal to all North American elm species. Since its initial discovery in 1975 in the Brandon, Winnipeg and Selkirk areas, DED has gradually spread and now extends throughout the entire natural range of the American elm in Manitoba. Infection levels are high along river corridors and shelterbelts where elm is most prevalent. Throughout the reporting period, Manitoba Conservation has had cost-sharing agreements in place with 28 to 38 communities each year. Within the cost-sharing communities, Manitoba

Conservation is responsible for the survey and marking diseased and hazard elm trees. Hazard elm trees are decadent to the point of supporting the breeding of elm bark beetle, the insect vector responsible for spread of the disease.

Manitoba Conservation is also responsible for the removal of infected and hazard elms within the majority of the cost- sharing communities. They cost-share other aspects of DED management such as sanitation pruning, basal spraying for control of the elm bark beetle, replacement planting, site specific inventory, general tree care and education and training courses approved by the province.

The city of Winnipeg, which does not have a cost-sharing agreement with the province, operates its own DED program. The city receives annual assistance in the form of a $900,000 grant from the provincial Department of Intergovernmental Affairs. To assist the city, Manitoba Conservation also carries out surveys and sanitation for DED within a buffer zone surrounding the city.

Throughout the reporting period the total number of elms removed from the province annually ranged from approximately 15,620 to 30,325. The average annual loss (in selected communities having consistent data) throughout the reporting period was 4.3 per cent. In comparison, the losses for the same communities during the previous reporting period were 3.2 per cent. The increase in elm losses during this reporting period is attributed to a reduction in program funding in the early 1990s. This reduced funding resulted in the elimination or reduction of buffer zones around many of the cost-sharing agreement communities. It also reduced surveys for elm fuel wood piles which harbour elm bark beetles and reduced public education about DED. In the past three years, funding levels are back to late 1980s levels.

Two research programs on DED management were implemented during the reporting period. One, a mark and recapture study, determined the probable distances native elm bark beetles would travel when dispersing from their winter sites and summer brood wood. This study has been completed and a report on the results will be published in an accredited journal. The other research program involved screening American elms for resistance to DED. Seedlings from field-resistant mature American elms are being grown, inoculated with the DED fungus and assessed for resistance to the fungus. To date, up to 15,000 elm seedlings have been grown in several areas in southern Manitoba and are being screened for resistance.

Emergency Dutch Elm Disease Buffer Zone Program

The DED buffer zone around Winnipeg was first established in 1980 to slow the spread of DED into the city. Since the zone's reduction in 1991, the percentage of Winnipeg's elm population removed for DED management has increased to 3.5 per cent and is approaching epidemic proportions. As a result of this high increase, a four-year emergency-funded program was implemented to re-establish the buffer zone to its pre-1990 size. It also set a target of marking and removing 5,000 diseased or hazard elm trees each year from the expanded buffer zone. The initial three years (1998-2001) fall within the current reporting period. From 1998-2000, 28,960 diseased or hazard elm trees were marked for removal and 17,900 trees were removed from the expanded buffer zone around Winnipeg.

Forest Renewal

Manitoba's Forest Renewal Program was developed to ensure harvested forests regenerate quickly to the same forest types as was removed; thereby, maintaining the existing mosaic of stand types over the landscape. This is achieved through both tree planting and natural regeneration methods.

Harvest and Treatments Summary

The number of hectares harvested and treated for forest renewal from 1986 to 1995 remained relatively constant over the 10-year period. However, the area of hardwood harvested and regenerated naturally during the last five-year period (1996-2001) increased significantly. This is primarily due to a large increase in hardwood use by L-P, which has more than tripled the area harvested. Due to their capacity to regenerate naturally, hardwood sites are typically not silviculturally treated.

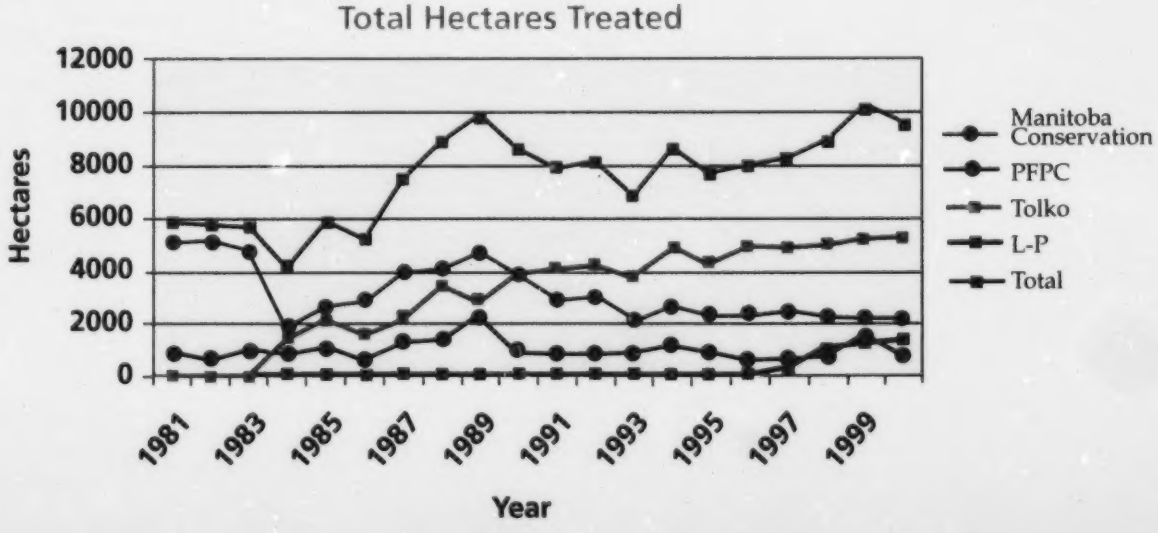


Table A4: Area harvested and treated[1]

	1996-2001	1991-95	1986-90	1981-85
Harvest				
Hardwood	22,803	6,769	5,045	n/a
Softwood	55,814	50,984	53,377	n/a
Total	78,618	57,753	58,422	54,149
Planted	34,422	31,128	29,475	11,735
Scarified	11,227	7,885	8,810	14,347
Seeded	1,212	37	1,645	1,299
Treated	46,862	39,050	39,930	27,381
Percentage of Softwood Treated	84	77	75	
Untreated	8,952	11,934	13,234	26,768
Percentage of Softwood Untreated	16	23	25	

Treated includes both provincial and industry activities.

Table A5: Total hectares treated

	1996	1997	1998	1999	2000	1996-2001	1991-95	1986-90	1981-85
MC	2,372	2,500	2,285	2,138	3,248	12,543	13,005	19,464	19,416
PFPC	623	624	674	1,457	648	4,026	4,462	6,332	4,299
Tolko	4,930	4,954	5,108	5,316	6,595	26,903	21,582	14,134	3,666
L-P	0	144	866	1,220	1,160	3,390	n/a	n/a	n/a
TOTAL	**7,925**	**8,222**	**8,933**	**10,131**	**11,651**	**46,842**	**39,049**	**39,930**	**27,381**

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Tolko	**4,930**	**4,954**	**5,108**	**5,316**	**6,595**	**26,903**	**21,582**	**14,134**	**3,666**
L-P	0	144	866	1,220	1,160	3,390	n/a	n/a	n/a
TOTAL	**7,925**	**8,222**	**8,933**	**10,131**	**11,651**	**46,842**	**39,049**	**39,930**	**27,381**

Silviculture Surveys

Regeneration surveys are the initial inventory of an area following harvest, fire or reforestation activity. The surveys provide a thorough assessment of seedling quality, quantity and distribution. Most areas are surveyed three-to-seven years after depletion. To ensure forest industry and provincial staff are adequately trained to survey regenerating cut-overs, Forestry Branch staff train and certify all regeneration surveyors. Branch staff also train forest industry check surveyors and conduct periodic inspections during the survey seasons.

During the past five years, regeneration surveys were performed on approximately 64,000 hectares of forestland. Manitoba Conservation surveyed 19,550 hectares. Representatives from Tolko Industries Ltd. surveyed 34,555 hectares, Pine Falls Paper Company surveyed 9,375 hectares and L-P staff surveyed 525 hectares (beginning in 2000) on their respective FML areas.

Although softwoods may establish well initially, competition from other vegetation can severely reduce growth or cause mortality of young trees. Once softwood trees grow beyond the height of competing plant species they are considered Free To Grow (FTG). The Forestry Branch published Free To Grow standards (1998) and survey procedures (2000), which will be used at approximately 14 years of age to assess development of young softwood forests.

During the past five years Free To Grow surveys were performed on approximately 13,415 hectares of forestland. Manitoba Conservation surveyed 12,545 hectares, while representatives from Pine Falls Paper Company Limited (now Tembec Inc.) surveyed 875 hectares on their FML area. In 2000, Tembec Inc. also became the first Manitoba forest company to perform Free To Grow surveys.

Certificates of Reforestation for areas surveyed from 1996 to 2000 and having attained reforestation standards were awarded to Tolko Industries Ltd. for approximately 28,120 hectares, to Tembec Inc. for 7,090 hectares and to L-P for 525 hectares.

Vegetation Management

A study of regeneration surveys on over 100,000 hectares of harvested areas (cut-overs) from 1986 to 1995 found a high proportion of softwood sites were regenerating as mixedwoods. This illustrated the need for improvements in vegetation management for these sites to be successfully regenerated to Free To Grow softwood sites and maintain the existing mosaic of forest types.

Cost-effectiveness and environmental concerns prompted significant efforts to improve Manitoba's use of vegetation control agents. Aerial application of chemical herbicides by Manitoba Conservation is being gradually replaced by ground-based, vegetation control methods, with both mechanical and manual methods being used. To apply the most effective control during the optimal time period, mechanical-chemical site preparation has been favoured and its use has increased. The technique allows crop seedlings more initial competition-free growing space during establishment. It also allows long-term maintenance of species diversity and growth of other vegetation adjacent to the planting micro-sites.

Ground-based application of herbicides has also been improved through the use of satellite-based Global Positioning System (GPS) technology and computer-based Geographic Information Systems (GIS) to accurately track and analyze the projects. The information collected allows much greater

control of application and more exact calculation of dosage and application rates. In addition, significant improvements have been made in selective, manual application of herbicides. As a result, Manitoba Conservation is increasing its use.

A 1995 project will monitor the long-term effect of aerial herbicide application on competition and conifer species. Permanent sample plots in selected juvenile plantations were established just prior to pesticide application and are being assessed at one, three, and five years following treatment. Measurements and changes in density of trees, shrubs, herbs and available browse to ungulates are being recorded. These trials are ongoing.

A vegetation management field trial in the 1990s (The Northern Manitoba Field Trial of Vision for Plantation Release) was re-measured annually until its completion in 1997. Results are currently being analyzed.

Tree Improvement

The goal of the Tree Improvement Program is to produce genetically improved seed for forest regeneration; increase the yield and quality of future forests; and ensure the conservation of the genetic resource. Programs are conducted in individual breeding zones throughout the province.

The three major forest companies operating in Manitoba have entered co-operative agreements with the Forestry Branch to share costs and benefits of programs within their licence areas. Between 1996-2001, two new tree improvement program agreements were signed with L-P for black and white spruce in the Mountain zone. In 2000, a new co-operative program funding method was developed forming the Tree Improvement Trust Account.

Jack pine improvement programs started by the Canadian Forest Service in the Interlake, Northern and Eastern breeding zones in the early 1970s were turned over to the province for management in 1991. Work undertaken in seed orchards in these three zones during the five-year reporting period made these orchards capable of meeting regional seed demand for reforestation. In the Mountain Jack Pine Breeding Zone, a clonal seed orchard was established in 1998. A clonal orchard is composed of grafted seedlings to replicate the exact genetic makeup, or clone, the initial tree selected.

Tree improvement programs for black and white spruce were initiated by the province in the late 1980s. There are now tree improvement programs in seven black spruce and two white spruce breeding zones. Within the reporting period, genetically improved seed has begun to be collected from the black spruce seed orchard in the Lake Winnipeg East zone, while seed collections at black spruce seed orchards in the Interlake and Saskatchewan River zones and Mountain White Spruce Breeding Zones are expected to begin sometime in 2002 and 2003.

Tree Seedlings

Seedling requirements for tree planting programs initiated by Manitoba Conservation, Pine Falls Paper Company Limited (now Tembec Inc.) and L-P were produced through contracts awarded to Pineland Forest Nursery (a special operating agency) and private sector nurseries in Ontario and Alberta. Tolko Industries Ltd. is responsible for purchasing its seedling requirements under terms of its Forest Management Licence Agreement.

During the period 1996 to 2001, approximately 62.6 million seedlings were planted in Manitoba. Manitoba Conservation planted approximately 21,780,000 trees, Pine Falls Paper planted 6,624,000, Tolko planted 28,794,000 and L-P planted 5,383,000 on their respective licence areas.

Nursery stock procurement has undergone a major shift from bare-root stock to containerized seedlings. Bare-root stock use created a number of scheduling and logistical problems. Since the early 1990s, bare-root stock purchases dropped from approximately 3.5 million to 1.5 million in 2000.

Container grown seedlings offer a number of advantages. The wide variety of container sizes and types allow a better match of seedlings to the site conditions. They are easier to handle, package and store. Because bare-root seedlings were grown outside, they have to endure many climatic and biotic stresses which sometimes result in high levels of mortality and damage. Bare-root seedlings usually take two or three years to grow while container stock takes 10 months. Container stock use allows more rapid reforestation of sites. It is also less expensive per seedling than traditional bare-root seedlings.

The use of over-winter and current crop container seedling stock allows more flexible planting programs and a wider variety of stock types and sizes. To assist forestry managers in correct selection of stock types and sizes for their planting blocks, a nursery stock trial (in co-operation with Pineland Forest Nursery and L-P) was started in 1998, and re-measured annually. A stock identification tracking system was also developed and incorporated into seedling production and tree planting contracts. It will allow future analysis of stock performance.

Forest Administration

Manitoba Conservation administers and regulates the allocation, revenue collection, harvesting and utilization of Crown timber activities as part of its mandate to facilitate economic development.

Timber Sales Administration

The timber sales office of the Forestry Branch provides authorization to individuals and companies to harvest timber on Crown lands. Timber sales administration staff collect fees and document timber harvest information including tree species. It includes volume and location of timber harvested for all types of tenure and permit holders. Timber sales staff provide direction and advice to FML holders about their administration of timber harvest payment and timber tracking on their licence areas.

Forest Management Agreements, Timber Sale Agreements and Timber Permits authorize harvesting of Crown timber. During the reporting period, the average annual harvest in Manitoba was 2.2 million cubic metres. FML holders harvested approximately 1.5 million cubic metres annually, or 67 per cent of the total provincial Crown harvest. Two hundred commercial timber sale operators harvested an average 652,000 cubic metres annually, or about 30 per cent of the total for the five-year period. The remaining 70,000 cubic metres (3 per cent) the annual average, was harvested in small volumes by approximately 3,000 permit holders.

Scaling Licence Certification

Current provincial forest legislation requires scalers (individuals who measure logs to determine the net yield) to be licensed to measure the volume of harvested wood and issue approved scaling instructions. Timber scaling licence certification courses were conducted annually during the five-year reporting period, with 76 newly-licensed scalers.

III - Partnership Initiatives

Manitoba Ecosystems Based Management (EBM) Project

Manitoba's Forest Plan ...Towards Ecosystems Based Management, released in 1996, was developed under the Canada-Manitoba Partnership Agreement in Forestry and is the province's blueprint for sustainable forest management into the 21st century. EBM requires a more holistic form of resource management. It balances values associated with air, soils, water, fisheries, wildlife, recreation and forests with various land use activities, including industrial development. Although the primary objective of EBM is to protect the integrity of natural systems, it also recognizes that people are a part of the same interactive system. It acknowledges the importance of human needs and our dependence on functioning terrestrial and aquatic ecosystems to meet our needs.

In July 1997, the Manitoba EBM pilot project was initiated in Ecoregion 90, on the east side of Lake Winnipeg. The project was established to implement recommendations from the Manitoba Forest Plan to advance the evolving concept of EBM. The overall goal was to explore ways to implement EBM at the ecoregion level, through an approach that addresses ecosystem functional relationships and public values.

The project was lead by Manitoba Conservation, with funding and other support also provided by: Louisiana-Pacific Canada Ltd., Manitoba Hydro, Manitoba Model Forest, Natural Resources Canada - Canadian Forest Service, Pine Falls Paper Company Limited, Southeast Resource Development Council Corporation, Tolko Industries Ltd., University of Manitoba - Natural Resources Institute, and University of Winnipeg - Centre for Forest Interdisciplinary Research (C-FIR).

The EBM pilot project produced an ecological description of Ecoregion 90, a review of public values about ecosystems and land use studies for the First Nations communities of Poplar River, Pauingassi, and Little Grand Rapids. It also produced a report on the social and economic landscape of Ecoregion 90.

Biodiversity Project

The Biodiversity Project was established in 1998 by the Forestry Branch in collaboration with the Natural Disturbance Project done for the Manitoba Model Forest. Working in partnership with Manitoba Conservation, the Manitoba forest industry, First Nations communities and other interested stakeholders, the Manitoba Model Forest sponsors projects to research and develop innovative ways of achieving sustainable development. The Natural Disturbance Project has been looking at practical ways to address the maintenance of forest ecosystem health while harvesting timber. The project will provide information to address this.

In the early 1990s, the Forestry Branch and the University of Manitoba initiated studies on how forest practices affect biological diversity of forest invertebrates and plants. The current Biodiversity Project builds on the knowledge gained from those earlier studies. The objective of the Biodiversity Project is to examine whether invertebrate biodiversity differs in forests that have been burnt through wildfire versus those that have been harvested. Invertebrates have been chosen for study in this project as they make up more than 80 per cent of forest species. Their condition can strongly influence species higher on the food chain.

In the fall of 1999, the lead role in the Biodiversity Project was transferred to the Centre for Forest Interdisciplinary Research (C-FIR) at the University of Winnipeg, with some in-kind support provided by the Forestry Branch. C-FIR has continued the project to date. The information provided by the Biodiversity Project will help forest managers protect and monitor biodiversity in the boreal forest. Project fieldwork has been completed and results in the form of a masters thesis are expected in 2003.

Sustainable Forest Management (SFM) Network

In April of 2001, the Forestry Branch became a partner in the SFM Network. The SFM Network began in 1995 as a research organization in the Federal Government Networks of Centre of Excellence program. The mission of the SFM Network is to develop knowledge, strategies and tools to ensure Canada's boreal forests are effectively managed so biological diversity is preserved and the resource base is sustained for future generations. The SFM Network is hosted by the University of Alberta with a current annual budget of $7 million. The budget is allocated to research that meets the SFM Network's mission. Additional funding partners include other provincial governments, forest industry companies and First Nations communities.

Canadian Council of Forest Ministers (CCFM)

Manitoba continues be an active member of several Canadian Council of Forest Ministers' (CCFM) committees, including the National Forestry Database Program, Criteria and Indicators Task Force, National Forest Information System, Canadian Forest Inventory Committee, Forests 2020 and the National Forest Strategy Coalition. Forestry Branch or department managers also participate in, or contribute to, other committees such as the International Forestry Partnerships Program and the Certification Working Group.

Manitoba was a participant in the 1998 National Forestry Forum in Ottawa and announced its intention to develop a new inventory approach as part of the ratifying of a new Canada's Forest Accord and National Forest Strategy.

Manitoba Model Forest

In 1992, the Canadian Forest Service, Natural Resources Canada, established a network of 11 model forests across the country to find new, innovative ways of managing our forests' sustainably. The Forestry Branch has been a partner in the Manitoba Model Forest since its inception. The Manitoba Model Forest comprises 1.05 million hectares of boreal forest, stretching eastward from Lake Winnipeg to the Manitoba-Ontario border. Activities in the model forest include research, development, education and communications on a wide range of subjects. Several projects have taken place over the past five years to which the Manitoba Forestry Branch has contributed either in-kind or financial support. Some examples of these projects include: Caribou Research and Habitat, Natural Disturbance Research, Genetic Diversity in Black Spruce and Spatial Model Development, among others.

Woodlot Program

Manitoba's Forest Plan ....Toward Ecosystems Based Management recommends the province support increased commercial wood-fibre production on private lands. To meet that and other provincial objectives for sound management of private forests, Manitoba continued to support the two private woodlot programs developed during the Canada-Manitoba Partnership Agreement in Forestry of the early 1990s.

These programs, delivered by the Manitoba Habitat Heritage Corporation and the Manitoba Forestry Association, continued to develop management plans and provide extension services to landowners during the reporting period. Since the inception of the programs, over 922 management plans (covering 50,400 hectares) have been completed, including 540 plans during the reporting period.

IV - Industry Development

Louisiana-Pacific Canada Limited (L-P)

The L-P mill began production early in February 1996, initially purchasing wood from private lands and hardwood quota holders. The company was later granted an Environmental Licence by the provincial government that approved the company's Forest Management Plan and allowed it to start harvesting activities on Crown land. The company presently purchases approximately 15 per cent of its fibre supply from private lands. In the winter of 2000-2001, LP began incorporating white birch into its fibre mix.

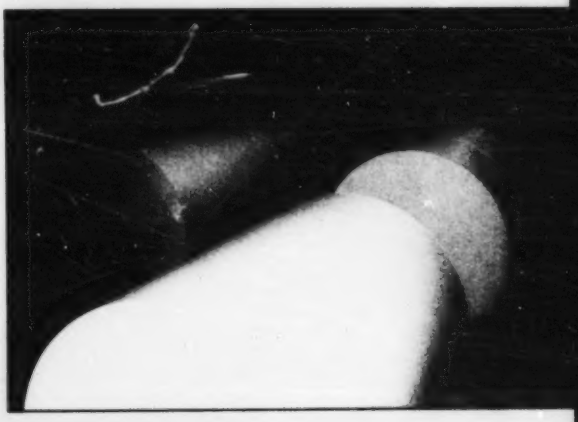
Pine Falls Paper Company (PFPC) Limited/Tembec

In 1996-97, Pine Falls Paper Company invested $36.5 million in a new de-inking facility. The facility can process 150 tonnes of newspapers and magazines per day.

Anticipated to take place over seven years, a $500 million expansion of PFPC got under way in 1997, initially with a new thermal mechanical pulping system.

On February 25, 1998, Tembec purchased 35 per cent of the outstanding common shares of PFPC Ltd. Total share purchases were completed in early 2001. Tembec's principal manufacturing facilities are centered in northwestern Quebec and northeastern Ontario. The company is principally involved in the production of lumber, pulp, newsprint, paperboard and oriented strandboard.

Following the initial acquisition period, Tembec Inc. approved conversion of the old Pine Falls groundwood mill to a thermo-mechanical pulp (TMP) mill. Operational startup of the mill took place in April 2001. The new TMP mill allows use of significant amounts of jack pine, up to 50 per cent of the total mill furnish) with the potential to use some small quantities of aspen as well. The final stage of the expansion will see construction of a new paper machine that will double the mill's capacity. While 100 jobs have been eliminated due to the modernization, an equal number of new jobs are planned as part of the First Nations Limited Partnership (FNLP) sawmill project.



Tembec/First Nations Limited Partnership (FNLP) Sawmill Project

Late in the five-year reporting period, Tembec entered discussions with various First Nations communities within and adjacent to its Forest Management Licence on a joint venture sawmill. Two partnership companies have been formed. Kiiwetino Ma"iingan, the woodlands component of the venture, and Gaa-bi-mooka"ang Ltd., the sawmill component. Manitoba Conservation continues to work with the partners to identify potential wood supply for the proposed project.

Creation of New Hardwood Quotas in Mountain Forest Section

Manitoba created 22 new hardwood quotas in the Mountain Forest Section during the reporting period. They were auctioned on August 13, 1996, for a total annual allocation volume of 40,000 cubic metres. This was in response to requests from local operators for access to a hardwood timber supply. In addition, a further 10,000 cubic metres were retained for own-use timber permits. This 50,000 cubic metres roundwood timber volume was identified as a hardwood reserve, withheld from L-P's Forest Management Licence commitment, and was specifically identified for residents of the Mountain Forest Section.

Spruce Products Limited (SPL) Expansion

SPL has operated sawmills and pulpwood operations throughout Manitoba since 1942. SPL is Manitoba's second-largest primary sawmill, producing upwards of 27 million board-feet of softwood lumber annually.

In July 1997, SPL and Manitoba entered a Wood Supply and Development Agreement to support the company's proposed state-of-the-art $12 million lumber production facility. The agreement provided a wood-fibre supply from the Mountain Forest Section to April 2020 for the new sawmill opened in 1999.

Early in the reporting period, the company added a new automated lumber sorter and stacker. Since 1999, SPL has added two new lumber drying kilns and a power generating unit and has formed another company producing an animal bedding product line from wood byproducts.

Tolko Industries Ltd. Purchase of Repap Manitoba Inc.

Tolko Industries Ltd., a privately-held forest products company, headquartered in Vernon, B.C., purchased Repap August 8, 1997. Tolko agreed to continue Repap's application process for a new Environment Act licence. Since its purchase, Tolko has undertaken a major redevelopment and upgrade of the sawmill to nearly double the lumber output to 237 million board feet and provide enough residual chips to run the pulp mill. This expansion was completed by late fall 2000.

Review of Forest Management Licence #2 Southern Area

In 1999, Manitoba started to review the Tolko Forest Management Licence Agreement in relation to Tolko's tenure in the part of the FML area south of the 53rd parallel. This review, which was ongoing at the end of the reporting period, was initiated, in part, to examine sustainability issues and existing fibre demands.

Softwood Lumber Agreement between Canada and the USA

The Softwood Lumber Agreement (SLA) was signed in 1996 to resolve an ongoing dispute over the export of Canadian softwood lumber to the U.S. The SLA involves the imposition of a Canadian border fee on annual softwood lumber exports over 14.7 billion board -feet from the four major lumber producing provinces: B.C., Alberta, Ontario and Quebec. In return for these restraints on exports, the U.S. agreed not to launch any trade remedy actions (i.e. countervail investigations) on softwood lumber for five years. Manitoba was not a party to this agreement and the export fee did not apply to Manitoba exports of softwood lumber.

Stakeholders on both sides of the border indicated they were not satisfied with the agreement and would not renew it "in its current form." The agreement expired March 31, 2001.

V - Status of Forest Resources

Manitoba's landbase by status and ownership is shown in Table B1 (with more detail in B2 and B3).For classification purposes, Manitoba is divided into the Forest Zone, the Tundra Transition Zone, Tidal Flats and Major Lakes.

The Forest Zone is 38.7 million hectares, comprising the southern 59.6% of the province. Of the Forest Zone 22% or 14.3 million hectares is productive forest, including the Aspen Parkland Section which primarily coincides with Manitoba's agriculture zone.

Tundra Transition Zone comprises 22.7 million hectares, or the northern 34.9% of the province. It offers minimal commercial forestry possibilities but provides subsistence needs of residents and wildlife habitat. Tidal Flats along Hudson Bay comprise 187,813 hectares or 0.3 percent of Manitoba.

Major Lakes (Lake Winnipeg, Lake Manitoba and Lake Winnipegosis) make up approximately 3.4 million hectares or 5.2 percent of the province.

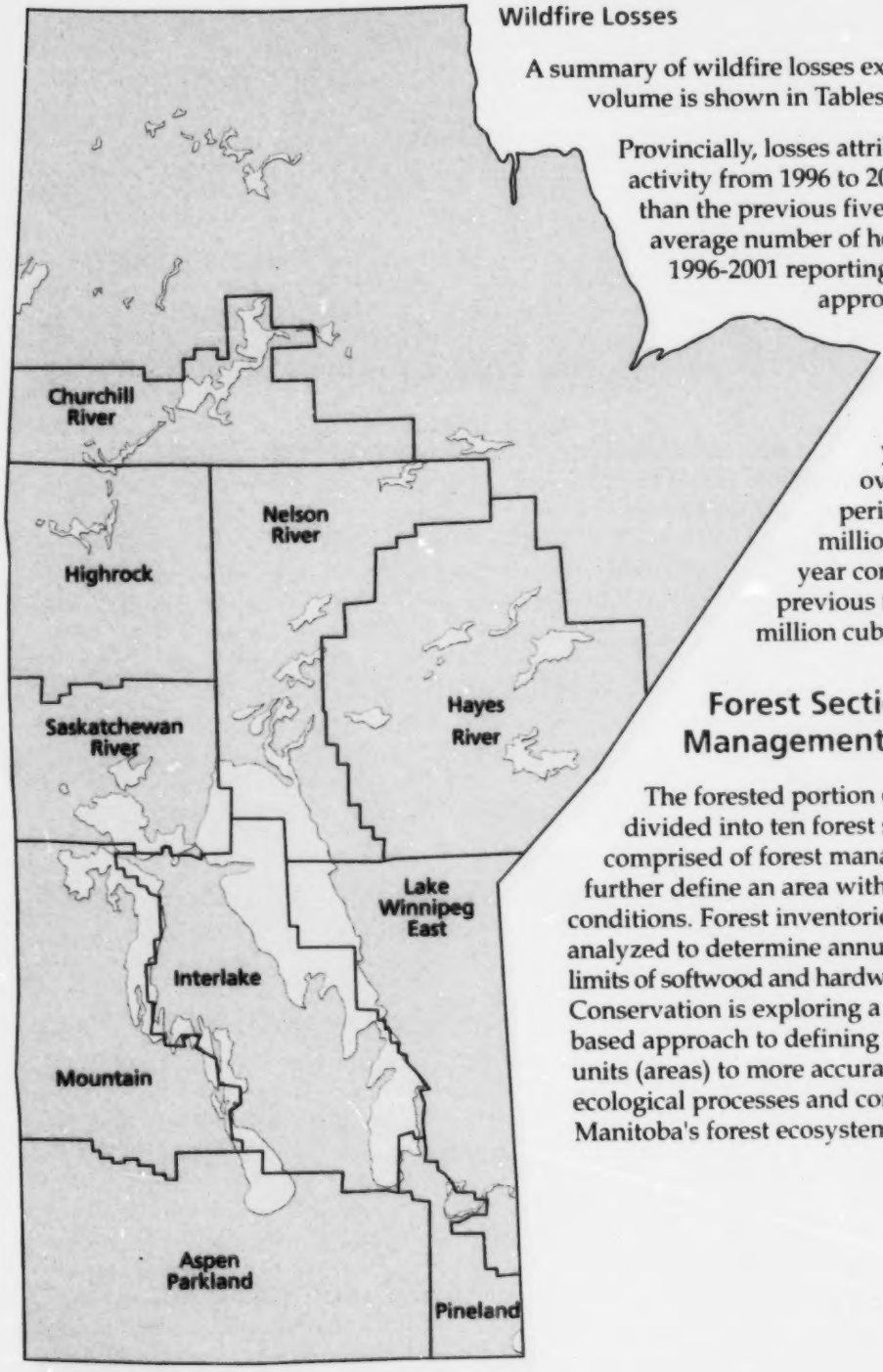
Provincial Crown Land Open has 12.3 million hectares available for harvesting. This includes 2.7 million hectares of Provincial Crown Land capable of supporting productive forest land identified as potential, but has no identifiable forest cover.

During the forest inventory process both merchantable wood volumes, and area of productive forest land are determined on private forest lands as per Table B8 and B9.

Federal productive forest land area comprises 246,778 hectares located primarily within Riding Mountain National Park, where commercial forestry is not practiced. The 237,185 hectares of Indian Reserve Land distributed throughout Manitoba contains 95,248 hectares, of productive forest land. The area of Indian Reserve Lands will increase as Treaty Land Entitlements are addressed. Provincial Parks and protected areas will also be increasing with the establishment of new parks and implementation of the Protected Areas Initiative throughout Manitoba.

Merchantable volume by status and ownership is shown in Table B4.

Treed tundra:
Tundra transition zone comprises 35% of the province.



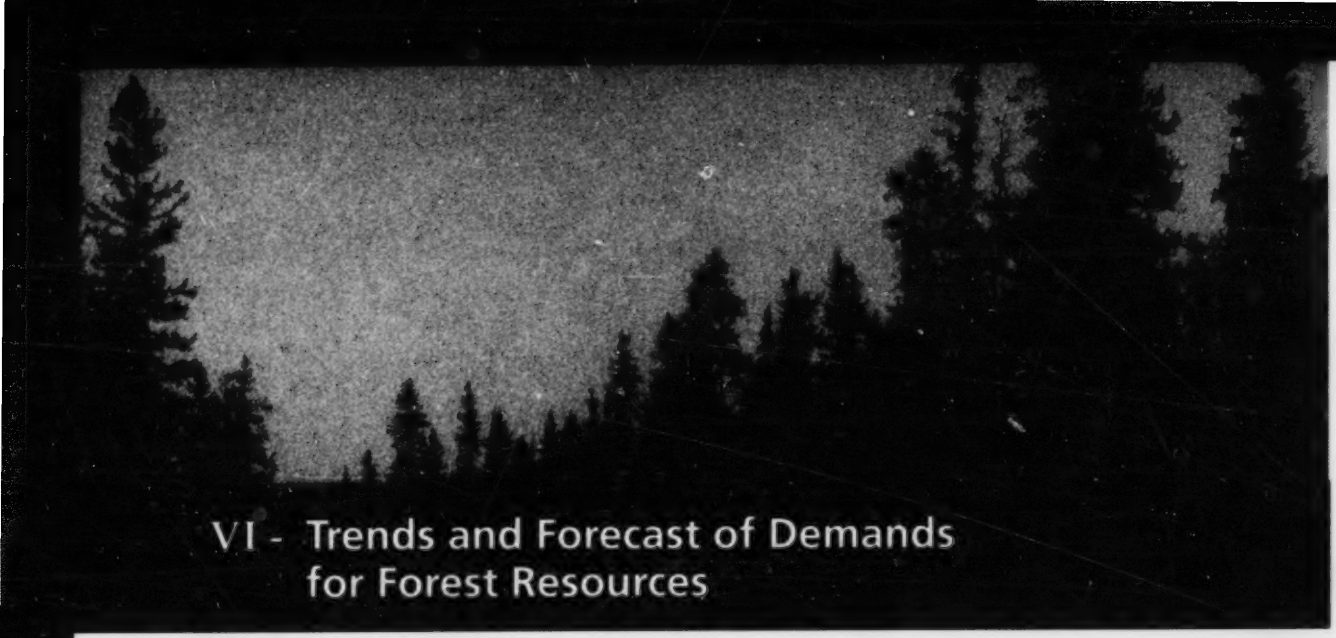
Wildfire Losses

A summary of wildfire losses expressed in area and volume is shown in Tables B10 and B11.

Provincially, losses attributed to wildfire activity from 1996 to 2000 were less severe than the previous five-year period. The average number of hectares burned in the 1996-2001 reporting period dropped to approximately 168,000 hectares per year, from 591,000 hectares per year in the previous five years. Volume losses over the five-year period averaged 1.5 million cubic metres per year compared to the previous five years at 7.7 million cubic metres per year.

Forest Sections and Forest Management Units

The forested portion of the province is divided into ten forest sections. These are comprised of forest management units that further define an area with common forest conditions. Forest inventories within units are analyzed to determine annual allowable harvest limits of softwood and hardwood species. Manitoba Conservation is exploring a more ecologically-based approach to defining forest management units (areas) to more accurately represent the ecological processes and conditions found in Manitoba's forest ecosystems.



VI - Trends and Forecast of Demands for Forest Resources

Softwood lumber consumption in the U.S. reached record highs in 1997 and 1998. As the global economy weakened in late 1999, consumption levels began to fall and continued downward through 2000 and 2001. Weak demand lowered softwood lumber prices. Canadian softwood lumber prices are expected to follow the recovery of the North American economy.

Manitoba's softwood lumber industry has undergone several changes within the five-year reporting period. Tolko Industries Ltd. undertook an expansion of its sawmill operation in The Pas. Tembec Inc. (formerly Pine Falls Paper Company), together with First Nations partners, proposes to develop a joint venture sawmill in Pine Falls.

L-P's oriented strandboard mill in Swan River reached full capacity with annual hardwood consumption at 800,000 cubic metres. This production capacity is expected to continue depending on market variation. Market prices for oriented strandboard have generally followed those of softwood lumber since 1999.

Rebuilding of Tembec Inc.'s newsprint mill has expanded the company's potential to increase newsprint production. Newsprint price trends show a gradual increase over the five-year reporting period due to reduction in capacity by other North American mills.

Demand for unbleached kraft paper, produced by Tolko, has remained consistent during the past reporting period.

Engineered wood products, specifically those using hardwoods such as poplar and aspen, have been the strongest performers in the North American forest products sector within the reporting period. Such products include oriented strandboard, laminated veneer lumber, composite panels and glued laminated timber. Continued growth of engineered wood products is expected over the next decade. For example, laminated veneer lumber production in North America was 56.3 million cubic feet in 1999 and is projected to hit 71 million cubic feet in 2002. Increasing demand for engineered wood products may provide opportunities to develop Manitoba's unallocated hardwood resources, particularly where traditional forest products development has not been economically viable.

Increased Interest in Hardwoods

New technological advances, such as engineered wood products, have raised interest in unallocated Crown hardwoods, particulary aspen, during the reporting period. Manitoba still has unallocated volumes of aspen, primarily in the north. However, the quality and distribution of this resource may constrain the range of economic development opportunities.

Non-Timber Forest Products

Throughout the five-year period, there was increased interest in generating economic opportunities within the non-traditional forest products (NTFP) sector. NTFP include products such as mushrooms, berries and medicinal plants. In recent years, commercial inquiries from within and outside the province have increased significantly.

Competing Demands For Forest Land Base

Demands to designate Crown forestlands, to meet land use objectives other than forestry, continued to increase during the reporting period. Along with maintaining a strong forestry sector, governments across Canada are striving to meet national and international commitments for protected areas, First Nations communities and climate change. In addition to Manitoba's current commitments, First Nations and northern communities continue to demonstrate interest in accessing more wood fibre for economic and community development.

Under the terms of the Treaty Land Entitlements (TLE), certain lands were identified for First Nations people with outstanding treaty claims during the reporting period. Some First Nations communities may choose to use their TLE selection lands for economic development. However, once transferred, these lands are no longer under provincial jurisdiction and cannot be used to meet provincial timber allocation commitments. TLE selections to date total over 263,772 hectares.

Land selection by some First Nations communities under the Northern Flood and Grand Rapids Forebay Agreements continued throughout the reporting period. Individual agreements provide similar land selection rights as TLE for eligible First Nations communities.

Manitoba's Protected Areas Initiative (i.e. areas that do not permit industrial activities such as logging or mining) has set aside 53,650 square kilometres since the program's inception in the early 1990s. Although much of the early work on this program was in non-productive forest areas, by the end of the reporting period focus had moved to areas of forestry activity. Department staff from Forestry and the Parks and Natural Areas branches along with regional staff, have been exploring ways to fulfil these commitments by integrating activities on the forest landbase.

The impact to the forest industry of land withdrawals (and corresponding timber volume reductions) for other resource-use demands is largely unknown. During the reporting period, initial steps were taken to develop a new forest lands inventory and resource analysis process. Assessing current wood supply and determining impacts of potential forest land withdrawals on commercial wood supply has been identified as a departmental priority for the next five year period.

VII - Conclusion

During the past five years, Manitoba's forest sector continued to evolve. Significant partnerships were formed between government, industry and First Nations communities for mutual economic development. During the reporting period, seeds were sown for new inventory and wood supply processes, increasing Aboriginal participation in forestry and facilitating industry development. These areas will continue to be the priorities for forest management over the next five years along with increased activity on issues of global significance such as climate change, in particular carbon sequestration. Other priorities for the next five years include development of a boreal forest strategy, review of *The Forest Act* and participation in broad area planning for the east side of Lake Winnipeg.

Web site Addresses

Canada's Forest Network	http://www.forest.ca/
National Forestry Database Program	http://nfdp.ccfm.org/
Canadian Council of Forest Ministers	http://www.ccfm.org/
Canada's National Forest Inventory	http://www.pfc.cfs.nrcan.gc.ca/monitoring/inventory/index_e.html
Natural Resources Canada, Canadian Forest Service	http://www.nrcan-rncan.gc.ca/cfs-scf/index_e.html
State of Canada's Forest Report	http://www.nrcan.gc.ca/cfs-scf/national/what-quoi/sof/latest_e.html
National Forest Strategy Coalition	http://nfsc.forest.ca/
Model Forest Network	http://www.modelforest.net/
Manitoba Model Forest	http://www.manitobamodelforest.net/
Manitoba Conservation	http://www.gov.mb.ca/natres/
Manitoba Conservation, Forestry Branch	http://www.gov.mb.ca/natres/forestry/

SECTION B - Charts and Numbers

Table B1: Manitoba Forest Area Summary By Status And Ownership - 2001 (in hectares)

OWNERSHIP	PRODUCTIVE FOREST LAND													
	POTENTIAL	REGEN	YOUNG	INTERMED	MATURE	OVER MATURE	PRODUCTIVE TOTAL	FORESTED NON PROD	NON FORESTED	TOTAL LAND	WATER	TOTAL	PERCENT FOREST ZONE	PERCENT MANITOBA
PROVINCIAL - CLOSED	72,376	26,836	47,067	186,155	73,829	28,554	434,817	176,643	48,999	660,459	129,099	789,558	2.0%	1.2%
PROVINCIAL - OPEN														
PROV. FOREST, FOREST, & PARK	1,557,861	586,954	1,261,680	1,746,134	539,542	69,332	5,761,503	5,651,493	732,907	12,145,902	2,348,680	14,494,582	37.4%	22.3%
F M L # 1	91,469	34,559	63,000	176,929	92,882	26,846	485,685	157,314	54,681	697,680	20,390	718,070	1.9%	1.1%
I.W.S.A. #1 & #2	156,432	121,624	150,638	265,172	110,233	27,425	851,523	745,315	295,179	1,892,016	72,041	1,964,057	5.1%	3.0%
F M L # 2	826,065	234,427	937,121	1,276,814	768,120	196,786	4,239,334	3,246,267	866,695	8,352,296	1,531,209	9,883,505	25.5%	15.2%
F M L # 3	66,992	32,542	108,402	174,766	131,968	92,931	607,600	142,447	257,992	1,008,039	128,513	1,136,552	2.9%	1.7%
INTERNATIONAL NICKEL	790	4,628	9,894	23,110	13,375	3,555	55,352	22,504	9,002	86,858	14,534	101,392	0.3%	0.2%
AGRICULTURE	8,453	26,359	51,926	139,028	60,853	11,708	298,327	70,621	570,059	939,006	96,930	1,035,936	2.7%	1.6%
SUB - TOTAL OPEN	2,708,062	1,041,092	2,582,662	3,821,952	1,716,972	428,584	12,299,323	10,035,960	2,786,514	25,121,797	4,212,296	29,334,094	75.7%	45.1%
PROVINCIAL - RESTRICTED	12,354	5,639	17,638	32,259	19,467	13,580	100,936	19,546	39,551	160,032	50,955	210,987	0.5%	0.3%
SUB - TOTAL PROVINCIAL	2,792,791	1,073,567	2,647,367	4,040,365	1,810,268	470,718	12,835,076	10,232,149	2,875,063	25,942,288	4,392,350	30,334,638	78.3%	46.7%
FEDERAL	15,777	3,780	6,408	48,566	91,152	81,095	246,778	17,004	46,804	310,586	12,832	323,418	0.8%	0.5%
MUNICIPAL	222	776	507	1,274	344	34	3,157	804	2,225	6,186	0	6,186	0.0%	0.0%
PRIVATE	14,977	59,357	138,546	458,091	270,767	44,950	986,688	177,242	6,470,039	7,633,969	24,449	7,658,417	19.8%	11.8%
LOCAL GOVERNMENT DISTRICT	9,055	15,824	18,638	37,040	20,095	2,015	102,667	18,405	54,335	175,407	361	175,768	0.5%	0.3%
INDIAN RESERVE	10,221	9,588	22,570	30,447	16,826	5,596	95,248	37,712	99,779	232,738	4,447	237,185	0.6%	0.4%
TOTAL FOREST ZONE	2,843,043	1,162,892	2,834,036	4,615,783	2,209,452	604,408	14,269,613	10,483,315	9,548,246	34,301,174	4,434,438	38,735,612	100.0%	59.6%
TUNDRA/TRANSITION ZONE	0	0	0	0	0	0	0	8,336,565	11,745,619	20,082,184	2,601,784	22,683,968		34.9%
TIDAL FLATS	0	0	0	0	0	0	0	0	187,813	187,813	0	187,813		0.3%
MAJOR LAKES	0	0	0	0	0	0	0	0	0	0	3,401,386	3,401,386		5.2%
MANITOBA	2,843,043	1,162,892	2,834,036	4,615,783	2,209,452	604,408	14,269,613	18,819,880	21,481,678	54,571,171	10,437,608	65,008,779		100.0%
PERCENT PRODUCTIVE	19.9%	8.1%	19.9%	32.3%	15.5%	4.2%	100.0%							
PERCENT LAND	5.2%	2.1%	5.2%	8.5%	4.0%	1.1%	26.1%	34.5%	39.4%	100.0%				
PERCENT MANITOBA	4.4%	1.8%	4.4%	7.1%	3.4%	0.9%	22.0%	28.9%	33.0%	83.9%	16.1%	100.0%		

Table B2: Forest Zone Area Summary By Forest Section All Status And Ownerships - 2001 (in hectares)

FOREST SECTION	PRODUCTIVE FOREST LAND											
	POTENTIAL	REGEN	YOUNG	INTERMED	MATURE	OVER MATURE	PRODUCTIVE TOTAL	FORESTED NON PRODUCTIVE	NON FORESTED	TOTAL LAND	WATER	TOTAL
ASPEN PARKLAND	7,797.9	44,764.5	105,840.2	335,690.1	200,919.0	40,245.0	735,256.7	143,765.8	5,480,172.1	6,359,194.6	105,732.8	6,464,927.4
MOUNTAIN	164,181.3	54,854.5	201,075.0	457,657.0	382,994.7	228,482.8	1,489,245.3	473,090.2	1,295,445.3	3,257,780.8	234,873.2	3,492,654.0
PINELAND	39,836.2	38,098.3	93,268.5	295,752.0	113,825.3	35,188.6	615,968.9	230,225.3	247,613.0	1,093,807.2	44,444.9	1,138,252.1
LAKE WINNIPEG EAST	359,898.3	118,623.0	274,231.5	806,792.6	327,670.9	59,293.2	1,946,509.5	1,155,647.8	309,523.9	3,411,681.2	281,421.2	3,693,102.4
INTERLAKE	123,512.6	180,651.3	204,904.5	419,941.4	266,757.7	78,358.8	1,274,126.3	771,613.7	1,014,443.8	3,060,183.8	246,561.7	3,306,745.5
SASKATCHEWAN RIVER	84,916.6	52,703.7	162,486.1	262,860.5	144,117.5	66,610.9	773,695.3	876,221.8	373,899.5	2,023,816.6	616,175.9	2,639,992.5
HIGHROCK	531,083.6	100,556.3	457,356.8	509,902.5	246,397.5	18,842.3	1,864,139.0	1,086,911.0	194,068.4	3,145,118.4	526,515.8	3,671,634.2
CHURCHILL RIVER	252,560.6	321,727.3	594,227.7	448,590.9	48,679.6	2,210.1	1,667,996.2	754,303.5	76,557.3	2,498,857.0	599,400.4	3,098,257.4
NELSON RIVER	246,734.1	98,590.4	359,265.0	479,690.3	278,152.7	71,611.2	1,534,043.7	2,026,736.8	336,674.9	3,897,455.4	601,855.0	4,499,310.4
HAYES RIVER	1,032,521.4	152,322.6	381,380.4	598,906.1	199,937.3	3,564.7	2,368,632.5	2,964,798.7	219,847.7	5,553,278.9	1,177,457.3	6,730,736.2
TOTAL	2,843,042.6	1,162,891.9	2,834,035.7	4,615,783.4	2,209,452.2	604,407.6	14,269,613.4	10,483,314.6	9,548,245.9	34,301,173.9	4,434,438.2	38,735,612.1

Table B3: Forest Zone Area Summary By Forest Section Provincial Crown Land - Open - 2001 (in hectares)

FOREST SECTION	PRODUCTIVE FOREST LAND											
	POTENTIAL	REGEN	YOUNG	INTERMED	MATURE	OVER MATURE	PRODUCTIVE TOTAL	FORESTED NON PRODUCTIVE	NON FORESTED	TOTAL LAND	WATER	TOTAL
ASPEN PARKLAND	2,662.3	11,945.2	26,334.3	60,121.2	28,054.8	6,908.3	136,026.1	24,208.3	424,526.1	584,760.5	81,987.4	666,747.9
MOUNTAIN	137,272.7	39,198.2	146,872.3	293,943.0	232,311.3	122,757.4	972,354.9	413,194.2	336,419.1	1,721,968.2	213,568.9	1,935,537.1
PINELAND	33,768.9	31,665.4	77,971.1	251,920.1	93,460.1	29,172.6	517,958.2	202,673.5	112,883.6	833,515.3	43,285.0	876,800.3
LAKE WINNIPEG EAST	294,914.8	90,530.5	238,107.3	637,104.6	268,689.2	50,486.5	1,579,832.9	1,032,596.7	266,265.9	2,878,695.5	201,269.9	3,079,965.4
INTERLAKE	114,489.7	144,778.9	161,511.8	325,674.2	206,592.3	65,133.4	1,018,180.3	724,981.1	498,949.8	2,242,111.2	244,122.6	2,486,233.8
SASKATCHEWAN RIVER	82,702.1	52,160.5	159,590.5	255,953.9	140,918.6	64,270.7	755,596.3	863,156.0	342,427.2	1,961,179.5	587,135.0	2,548,314.5
HIGHROCK	515,198.4	99,408.7	449,405.0	484,677.3	228,870.4	15,797.0	1,793,356.8	1,053,994.3	182,969.7	3,030,320.8	475,761.8	3,506,082.6
CHURCHILL RIVER	252,555.7	321,727.3	593,942.8	448,503.5	48,607.5	2,166.4	1,667,503.2	754,250.1	75,697.3	2,497,450.6	599,387.5	3,096,838.1
NELSON RIVER	245,754.5	97,878.4	350,608.1	468,543.5	270,877.0	68,326.9	1,501,988.4	2,006,389.8	327,541.4	3,835,919.6	588,722.3	4,424,641.9
HAYES RIVER	1,028,742.7	151,799.3	378,318.5	595,510.5	198,590.6	3,564.6	2,356,526.2	2,960,515.9	218,834.0	5,535,876.1	1,177,055.8	6,712,931.9
TOTAL	2,708,061.8	1,041,092.4	2,582,661.7	3,821,951.8	1,716,971.8	426,583.8	12,299,323.3	10,035,959.9	2,786,514.1	25,121,797.3	4,212,296.2	29,334,093.5

Table B4: Merchantable Volume Summary By Status And Ownership - 2001 (in cubic metres)

OWNERSHIP	SOFTWOOD							HARDWOOD						
	JACK PINE	BLACK SPRUCE	WHITE SPRUCE	BALSAM FIR	TAMARACK LARCH	EASTERN CEDAR	TOTAL SOFTWOOD	TREMBLING ASPEN	BALSAM POPLAR	WHITE BIRCH	OTHER HARDWOOD	TOTAL HARDWOOD	TOTAL	PER CENT
PROVINCIAL - CLOSED	8,604,520	6,212,260	1,735,610	683,090	307,700	8,360	17,551,540	6,365,050	608,540	751,180	199,290	7,924,060	25,475,600	4%
PROVINCIAL - OPEN														
PROV. FOREST, FOREST & PARK	54,290,670	67,807,960	5,452,460	2,603,040	5,429,780	687,760	136,271,670	33,704,590	4,174,190	5,269,080	826,730	43,974,590	180,246,260	27%
F M L # 1	9,713,790	6,261,440	1,138,580	602,080	1,704,280	0	19,420,170	5,212,110	391,320	556,690	227,420	6,387,540	25,807,710	4%
I.W.S.A. #1 & #2	10,485,410	9,073,600	1,465,670	1,017,870	1,243,080	4,020	23,289,650	9,391,340	897,390	913,870	24,570	11,227,170	34,516,820	5%
F M L # 2	49,432,940	89,559,520	17,874,010	2,156,660	2,990,080	7,020	162,020,230	45,900,380	7,817,260	6,154,490	825,910	60,698,040	222,718,270	33%
F M L # 3	3,132,110	7,204,640	7,648,430	729,810	420,130	650	19,135,770	24,457,750	5,981,700	1,941,640	501,320	32,882,410	52,018,180	8%
INTERNATIONAL NICKEL	735,440	2,249,450	246,110	27,420	12,130	0	3,270,550	759,870	80,120	102,980	0	942,970	4,213,520	1%
AGRICULTURE	367,420	1,070,320	633,350	80,080	432,140	47,450	2,630,760	10,363,680	1,037,270	278,620	1,292,570	12,972,140	15,602,900	2%
SUB-TOTAL OPEN ZONE	128,157,780	183,226,930	34,458,610	7,216,960	12,231,620	746,900	366,038,800	129,789,720	20,379,250	15,217,370	3,698,520	169,084,860	535,123,660	79%
PROVINCIAL - RESTRICTED	1,589,290	1,538,470	907,030	146,270	125,730	100	4,306,890	2,420,270	397,890	200,020	114,260	3,132,440	7,439,330	1%
SUB-TOTAL PROVINCIAL	138,351,590	190,977,660	37,101,250	8,046,320	12,665,050	755,360	387,897,230	138,575,040	21,385,680	16,168,570	4,012,070	180,141,360	568,038,590	84%
FEDERAL	846,060	2,320,820	6,608,340	731,320	170,240	4,670	10,681,450	18,811,480	5,064,960	1,591,940	234,630	25,703,010	36,384,460	5%
MUNICIPAL	1,920	49,230	9,580	520	6,320	470	68,040	45,710	6,160	1,840	1,930	55,640	123,680	0%
PRIVATE	755,580	1,404,880	1,851,430	224,570	283,610	44,850	4,564,920	36,047,110	5,807,980	1,111,440	13,145,250	56,111,780	60,676,700	9%
LOCAL GOVERNMENT DISTRICT	176,640	176,060	205,410	34,020	80,680	16,100	688,910	3,881,680	550,700	123,180	169,160	4,724,720	5,413,630	1%
INDIAN RESERVE	376,500	1,202,120	381,110	140,010	87,020	12,260	2,199,040	2,068,730	343,540	196,320	265,490	2,874,080	5,073,120	1%
TOTAL FOREST ZONE	140,508,290	196,130,770	46,157,120	9,176,760	13,292,920	833,730	406,099,590	199,429,750	33,159,020	19,193,290	17,828,530	269,610,590	675,710,180	100%
PERCENT	21%	29%	7%	1%	2%	0%	60%	30%	5%	3%	3%	40%	100%	

Table B5: Merchantable Volume Summary By Forest Section All Status And Ownerships - 2001 (in cubic metres)

FOREST SECTION	JACK PINE	BLACK SPRUCE	WHITE SPRUCE	BALSAM FIR	TAMARACK LARCH	EASTERN CEDAR	TOTAL SOFTWOOD	TREMBLING ASPEN	BALSAM POPLAR	WHITE BIRCH	OTHER HARDWOOD	TOTAL HARDWOOD	TOTAL
ASPEN PARKLAND	125,820	233,530	832,750	7,310	207,650	300	1,407,360	23,941,360	2,822,420	456,570	13,811,430	41,031,780	42,439,140
MOUNTAIN	7,340,200	19,568,150	19,280,950	2,137,690	1,528,340	2,350	49,857,680	63,549,750	17,155,320	5,345,240	1,961,100	88,011,410	137,869,090
PINELAND	4,848,640	9,788,210	938,730	962,780	4,703,910	810,760	22,053,230	11,014,100	2,471,710	1,159,370	621,890	15,267,070	37,320,300
LAKE WINNIPEG EAST	40,939,160	25,498,590	3,326,900	1,936,200	3,455,390	9,490	75,165,730	20,529,400	1,022,120	1,878,170	419,220	23,848,910	99,014,640
INTERLAKE	10,975,410	9,343,910	3,739,600	1,618,080	1,581,810	10,830	27,269,640	33,366,100	3,476,210	1,983,520	501,500	39,327,330	66,596,970
SASKATCHEWAN RIVER	10,491,000	10,642,000	3,757,080	263,200	744,580	0	25,897,860	6,457,220	1,993,460	815,330	513,250	9,779,260	35,677,120
HIGHROCK	19,265,510	36,378,110	5,881,940	297,340	420,800	0	62,243,700	13,558,430	915,800	2,127,830	140	16,602,200	78,845,900
CHURCHILL RIVER	5,112,830	8,636,440	69,840	420	22,470	0	13,842,000	389,650	34,330	656,550	0	1,080,530	14,922,530
NELSON RIVER	14,457,880	45,766,340	6,546,390	865,270	524,200	0	68,160,080	15,886,700	1,880,750	2,181,890	0	19,951,340	88,111,420
HAYES RIVER	26,951,640	30,275,490	1,782,940	1,088,470	103,770	0	60,202,310	10,735,040	1,386,900	2,588,820	0	14,710,760	74,913,070
TOTAL	140,508,290	196,130,770	46,157,120	9,176,760	13,292,920	833,730	406,099,590	199,429,750	33,159,020	19,193,290	17,828,530	269,610,590	675,710,180

Table B6: Other Hardwoods Merchantable Volume Summary By Forest Section All Status And Ownerships - 2001 (in cubic metres)

FOREST SECTION	COTTON WOOD	BASSWOOD	MANITOBA MAPLE	ASH	WHITE ELM	LARGE TOOTH	WILLOW	BUR OAK	TOTAL OTHER HARDWOOD
ASPEN PARKLAND	302,690	224,320	1,758,110	3,235,450	2,124,120	0	94,560	6,071,980	13,811,430
MOUNTAIN	21,950	1,330	956,910	309,360	473,260	0	13,090	185,200	1,961,100
PINELAND	0	0	25,260	482,060	97,550	0	0	17,020	621,890
LAKE WINNIPEG EAST	0	0	9,890	354,680	44,710	5,180	0	4,760	419,220
INTERLAKE	2,490	1,140	132,080	151,090	52,790	0	1,300	160,610	501,500
SASKATCHEWAN RIVER	0	0	364,080	22,610	126,560	0	0	0	513,250
HIGHROCK	0	0	140	0	0	0	0	0	140
CHURCHILL RIVER	0	0	0	0	0	0	0	0	0
NELSON RIVER	0	0	0	0	0	0	0	0	0
HAYES RIVER	0	0	0	0	0	0	0	0	0
TOTAL	327,330	226,790	3,246,470	4,555,250	2,918,990	5,180	108,950	6,439,570	17,828,530

Table B7: Merchantable Volume Summary By Forest Section Provincial Crown Land - Open - 2001 (in cubic metres)

FOREST SECTION	JACK PINE	BLACK SPRUCE	WHITE SPRUCE	BALSAM FIR	TAMARACK LARCH	EASTERN CEDAR	TOTAL SOFTWOOD	TREMBLING ASPEN	BALSAM POPLAR	WHITE BIRCH	OTHER HARDWOOD	TOTAL HARDWOOD	TOTAL
ASPEN PARKLAND	74,870	75,120	172,520	1,830	85,810	170	410,320	4,371,900	446,470	73,530	1,367,520	6,259,420	6,669,740
MOUNTAIN	6,075,990	16,257,260	11,153,670	1,298,470	1,301,380	2,220	36,088,990	34,003,500	9,011,070	3,159,260	831,060	47,004,890	83,093,880
PINELAND	4,336,270	9,053,600	771,580	788,900	4,396,150	727,520	20,074,020	7,959,380	1,800,850	872,300	402,810	11,035,340	31,109,360
LAKE WINNIPEG EAST	32,015,510	21,385,010	2,583,290	1,462,240	3,139,270	6,960	60,812,280	16,481,950	808,840	1,500,420	353,410	19,144,620	79,756,900
INTERLAKE	10,639,530	8,752,880	2,845,150	1,245,980	1,529,340	10,030	25,022,910	21,806,320	2,394,600	1,521,240	266,710	25,988,870	51,011,780
SASKATCHEWAN RIVER	10,330,630	10,322,500	3,556,040	248,460	726,230	0	25,183,860	6,171,600	1,853,660	776,420	476,870	9,278,550	34,462,410
HIGHROCK	18,458,930	34,226,470	5,242,710	255,570	412,580	0	58,596,260	12,540,600	827,900	1,981,960	140	15,350,600	73,946,860
CHURCHILL RIVER	5,108,700	8,633,490	69,840	420	22,470	0	13,834,920	389,080	34,330	656,380	0	1,079,790	14,914,710
NELSON RIVER	14,271,730	44,452,460	6,304,590	821,640	515,540	0	66,365,960	15,434,210	1,829,660	2,112,420	0	19,376,290	85,742,250
HAYES RIVER	26,845,620	30,068,140	1,759,220	1,073,450	102,850	0	59,849,280	10,631,180	1,371,870	2,563,440	0	14,566,490	74,415,770
TOTAL	128,157,780	183,226,930	34,458,610	7,216,960	12,231,620	746,900	366,038,800	129,789,720	20,379,250	15,217,370	3,698,520	169,084,860	535,123,660

Table B8: Merchantable Volume Summary By Forest Section Private Land - 2001 (in cubic metres)

FOREST SECTION	JACK PINE	BLACK SPRUCE	WHITE SPRUCE	BALSAM FIR	TAMARACK LARCH	EASTERN CEDAR	TOTAL SOFTWOOD	TREMBLING ASPEN	BALSAM POPLAR	WHITE BIRCH	OTHER HARDWOOD	TOTAL HARDWOOD	TOTAL
ASPEN PARKLAND	49,700	144,850	537,520	5,290	44,370	110	781,840	17,797,970	2,226,500	356,900	11,891,950	32,273,320	33,055,160
MOUNTAIN	92,130	220,710	585,950	39,900	49,440	40	988,170	7,619,260	2,343,350	393,210	867,210	11,223,050	12,211,220
PINELAND	316,910	490,460	109,010	116,580	159,490	44,350	1,236,800	2,067,260	443,470	171,420	145,220	2,827,370	4,064,170
LAKE WINNIPEG EAST	62,200	85,730	42,140	22,910	9,360	200	222,540	248,280	25,290	18,710	25,780	318,060	540,600
INTERLAKE	146,350	144,870	486,840	34,130	13,410	150	825,750	8,120,920	683,450	144,350	192,760	9,141,480	9,967,230
SASKATCHEWAN RIVER	35,180	88,140	64,300	3,410	6,140	0	197,170	105,160	76,660	15,490	22,330	219,640	416,810
HIGHROCK	350	420	30	0	10	0	810	1,230	0	30	0	1,260	2,070
CHURCHILL RIVER	3,610	2,740	0	0	0	0	6,350	570	0	170	0	740	7,090
NELSON RIVER	49,150	226,870	25,630	2,340	1,390	0	305,380	86,200	9,260	11,130	0	106,590	411,970
HAYES RIVER	0	90	10	10	0	0	110	240	0	30	0	270	380
TOTAL	755,580	1,404,880	1,851,430	224,570	283,610	44,850	4,564,920	36,047,110	5,807,980	1,111,440	13,145,250	56,111,780	60,676,700

Table B9: Forest Zone Area Summary By Forest Section Private Land - 2001 (in hectares)

FOREST SECTION	PRODUCTIVE FOREST LAND							FORESTED NON PRODUCTIVE	NON FORESTED	TOTAL LAND	WATER	TOTAL
	POTENTIAL	REGEN	YOUNG	INTERMED	MATURE	OVER MATURE	PRODUCTIVE TOTAL					
ASPEN PARKLAND	2,983.0	29,024.2	64,967.3	256,001.8	163,626.2	27,194.9	543,797.4	105,309.7	4,970,585.7	5,619,692.8	19,301.4	5,638,994.2
MOUNTAIN	4,584.4	7,782.7	36,452.5	97,155.8	45,580.6	8,769.9	200,325.9	34,682.6	882,833.4	1,117,841.9	2,356.9	1,120,198.8
PINELAND	4,404.7	4,664.0	11,231.7	29,804.1	13,573.3	3,160.4	66,838.2	17,454.9	124,264.1	208,557.2	186.5	208,743.7
LAKE WINNIPEG EAST	249.8	473.8	1,114.5	2,791.8	1,634.8	837.2	7,101.9	1,246.8	11,251.5	19,600.2	81.9	19,682.1
INTERLAKE	2,191.8	17,086.5	22,845.1	68,717.2	43,780.4	3,354.2	157,975.2	12,911.7	444,933.6	615,820.5	1,220.1	617,040.6
SASKATCHEWAN RIVER	342.8	160.9	382.4	991.7	1,078.7	1,338.4	4,294.9	3,189.2	27,966.1	35,450.2	16.0	35,466.2
HIGHROCK	6.0	0.0	20.8	18.5	4.4	0.0	49.7	28.1	2,399.6	2,477.4	76.1	2,553.5
CHURCHILL RIVER	0.0	0.0	276.8	46.9	72.1	43.7	439.5	17.8	694.1	1,151.4	0.0	1,151.4
NELSON RIVER	189.4	162.9	1,227.8	2,559.5	1,416.4	251.2	5,807.2	2,374.1	5,093.0	13,274.3	1,209.7	14,484.0
HAYES RIVER	25.4	1.5	27.5	3.8	0.0	0.0	58.2	26.7	18.0	102.9	0.0	102.9
TOTAL	14,977.3	59,356.5	138,546.4	458,091.1	270,766.9	44,949.9	986,688.1	177,241.6	6,470,039.1	7,633,968.8	24,448.6	7,658,417.4

Table B10: Wildfire Area Losses By Forest Section All Status And Ownerships - 1996-2000 (in hectares)

FOREST SECTION	YEAR	PRODUCTIVE FOREST LAND									
		POTENTIAL	REGEN	YOUNG	INTERMED	MATURE	OVER MATURE	PRODUCTIVE TOTAL	FORESTED NON PROD	NON FORESTED	TOTAL LAND
ASPEN PARKLAND	1996	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1997	5.7	7.2	208.6	170.8	117.6	0.0	509.9	388.8	1,608.9	2,507.6
	1998	0.0	0.0	0.0	4.5	30.4	5.3	40.2	23.4	146.4	210.0
	1999	126.8	451.0	331.9	805.4	110.3	11.8	1,837.2	633.2	3,137.6	5,608.0
	2000	124.4	162.5	125.8	385.1	17.0	0.0	814.8	2,114.0	3,665.9	6,594.7
	TOTAL	256.9	620.7	666.3	1,365.8	275.3	17.1	3,202.1	3,159.4	8,558.8	14,920.3
	5yr Avg	51.4	124.1	133.3	273.2	55.1	3.4	640.4	631.9	1,711.8	2,984.1
MOUNTAIN	1996	32.3	2.5	59.0	218.0	22.0	99.1	432.9	16.1	17.7	466.7
	1997	0.0	0.0	0.0	22.8	22.9	14.7	60.4	17.1	15.5	93.0
	1998	75.1	0.0	146.3	110.1	163.8	2.9	498.2	259.7	711.7	1,469.6
	1999	462.8	21.4	723.9	2,072.1	604.1	28.0	3,912.3	1,532.6	985.3	6,430.2
	2000	0.0	2.4	0.0	2.6	3.3	0.7	9.0	52.0	22.7	83.7
	TOTAL	570.2	26.3	929.2	2,425.6	816.1	145.4	4,912.8	1,877.5	1,752.9	8,543.2
	5yr Avg	114.0	5.3	185.8	485.1	163.2	29.1	982.6	375.5	350.6	1,708.6
PINELAND	1996	4.5	3.0	22.0	16.5	14.1	0.2	60.3	8.2	50.6	119.1
	1997	0.3	0.6	2.2	11.0	6.8	0.0	20.9	33.4	24.7	79.0
	1998	22.9	18.1	13.3	84.5	0.9	12.0	151.7	64.5	11.5	227.7
	1999	56.4	111.5	57.2	392.5	150.1	177.9	945.6	269.8	775.9	1,991.3
	2000	3.9	11.0	38.7	168.7	9.8	3.8	235.9	147.1	404.9	787.9
	TOTAL	88.0	144.2	133.4	673.2	181.7	193.9	1,414.4	523.0	1,267.6	3,205.0
	5yr Avg	17.6	28.8	26.7	134.6	36.3	38.8	282.9	104.6	253.5	641.0
LAKE WINNIPEG EAST	1996	1,450.9	20.6	100.5	5,171.8	624.8	6.5	7,375.1	2,502.4	339.3	10,216.8
	1997	3.7	7.1	33.7	68.5	57.1	0.9	171.0	169.1	22.7	362.8
	1998	37.5	3.7	26.1	85.0	44.6	4.3	201.2	44.2	32.4	277.8
	1999	2,937.1	3,721.4	7,542.6	10,360.2	4,459.9	2,726.5	31,747.7	5,875.3	1,969.8	39,592.8
	2000	213.7	183.6	1,274.7	4,018.6	3,779.3	226.7	9,696.6	4,835.2	1,484.1	16,015.9
	TOTAL	4,642.9	3,936.4	8,977.6	19,704.1	8,965.7	2,964.9	49,191.6	13,426.2	3,848.3	66,466.1
	5yr Avg	928.6	787.3	1,795.5	3,940.8	1,793.1	593.0	9,838.3	2,685.2	769.7	13,293.2

Table B10: Wildfire Area Losses By Forest Section All Status And Ownerships - 1996-2000 (in hectares)

FOREST SECTION	YEAR	PRODUCTIVE FOREST LAND									
		POTENTIAL	REGEN	YOUNG	INTERMED	MATURE	OVER MATURE	PRODUCTIVE TOTAL	FORESTED NON PROD	NON FORESTED	TOTAL LAND
INTERLAKE	1996	26.4	18.6	97.5	235.4	127.4	1.4	506.7	339.8	1,249.5	2,096.0
	1997	57.7	33.1	2.3	64.3	48.7	5.0	211.1	135.0	301.2	647.3
	1998	19.2	6.8	96.4	407.5	143.0	62.3	735.2	217.7	1,462.9	2,415.8
	1999	133.0	222.4	107.8	584.0	454.1	134.4	1,635.7	471.4	3,364.2	5,471.3
	2000	21.0	323.4	253.8	263.5	250.3	60.8	1,172.8	132.1	3,727.2	5,032.1
	TOTAL	257.3	604.3	557.8	1,554.7	1,023.5	263.9	4,261.5	1,296.0	10,105.0	15,662.5
	5yr Avg	51.5	120.9	111.6	310.9	204.7	52.8	852.3	259.2	2,021.0	3,132.5
SASKATCHEWAN RIVER	1996	1.5	0.0	21.2	12.8	1.9	0.0	37.4	107.9	40.8	186.1
	1997	0.3	0.0	22.8	7.3	1.6	0.0	32.0	51.7	0.9	84.6
	1998	5.3	20.1	25.5	69.4	38.7	4.8	163.8	37.5	35.8	237.1
	1999	73.6	0.1	33.0	677.6	250.4	2.1	1,036.8	78.6	149.3	1,264.7
	2000	3.7	0.0	82.2	22.5	7.8	38.3	154.5	212.3	817.8	1,184.6
	TOTAL	84.4	20.2	184.7	789.6	300.4	45.2	1,424.5	488.0	1,044.6	2,957.1
	5yr Avg	16.9	4.0	36.9	157.9	60.1	9.0	284.9	97.6	208.9	591.4
HIGHROCK	1996	0.3	0.0	10.2	24.1	10.5	15.8	60.9	27.2	4.8	92.9
	1997	0.2	0.0	11.4	63.6	21.9	0.0	97.1	13.2	6.6	116.9
	1998	339.4	0.0	63.5	191.7	103.0	0.0	697.6	424.7	63.7	1,186.0
	1999	180.9	763.7	4,334.6	4,886.4	1,711.9	0.1	11,877.6	4,493.2	1,479.1	17,849.9
	2000	5.2	0.0	11.5	7.1	7.1	0.5	31.4	20.5	0.5	52.4
	TOTAL	526.0	763.7	4,431.2	5,172.9	1,854.4	16.4	12,764.6	4,978.8	1,554.7	19,298.1
	5yr Avg	105.2	152.7	886.2	1,034.6	370.9	3.3	2,552.9	995.8	310.9	3,859.6
CHURCHILL RIVER	1996	3,003.0	3,543.8	1,062.1	385.4	71.7	0.0	8,066.0	2,652.6	122.6	10,841.2
	1997	21.0	72.1	840.3	1,235.0	89.7	0.0	2,258.1	1,634.4	94.4	3,986.9
	1998	3,968.3	37,816.0	25,151.7	17,063.7	2,527.5	0.0	86,527.2	25,067.1	2,951.5	114,545.8
	1999	11.6	263.3	1,071.6	703.3	3.8	0.0	2,053.6	1,608.3	43.9	3,705.8
	2000	0.0	0.0	74.7	108.9	18.3	38.3	240.2	966.8	87.9	1,294.9
	TOTAL	7,003.9	41,695.2	28,200.4	19,496.3	2,711.0	38.3	99,145.1	31,929.2	3,300.3	134,374.6
	5yr Avg	1,400.8	8,339.0	5,640.1	3,899.3	542.2	7.7	19,829.0	6,385.8	660.1	26,874.9

Table B10: Wildfire Area Losses By Forest Section All Status And Ownerships - 1996-2000 (in hectares)

FOREST SECTION	YEAR	PRODUCTIVE FOREST LAND									
		POTENTIAL	REGEN	YOUNG	INTERMED	MATURE	OVER MATURE	PRODUCTIVE TOTAL	FORESTED NON PROD	NON FORESTED	TOTAL LAND
NELSON RIVER	1996	2.9	0.7	33.3	80.9	36.3	2.5	156.6	461.1	25.8	643.5
	1997	74.7	0.6	24.0	147.9	10.7	15.5	273.4	101.5	13.1	388.0
	1998	5.6	58.8	81.0	38.5	11.1	5.6	200.6	980.3	81.0	1,261.9
	1999	0.4	30.4	26.7	63.8	69.5	158.1	348.9	253.9	64.2	667.0
	2000	3,067.1	7.6	379.6	1,798.5	230.0	0.7	5,483.5	4,242.4	347.4	10,073.3
	TOTAL	3,150.7	98.1	544.6	2,129.6	357.6	182.4	6,463.0	6,039.2	531.5	13,033.7
	5yr Avg	630.1	19.6	108.9	425.9	71.5	36.5	1,292.6	1,207.8	106.3	2,606.7
HAYES RIVER	1996	4,047.7	2,746.4	5,002.5	5,307.5	2,976.1	0.0	20,080.2	19,872.3	940.4	40,892.9
	1997	170.3	120.4	376.8	645.3	77.0	0.0	1,389.8	1,393.6	125.9	2,909.3
	1998	1,069.9	81.0	1,332.6	1,903.7	648.0	0.0	5,035.2	6,232.3	385.5	11,653.0
	1999	803.2	99.1	1,331.0	1,831.2	825.8	24.5	4,914.8	2,858.3	297.5	8,070.6
	2000	4,635.2	102.5	1,142.8	3,563.9	2,870.7	0.0	12,315.1	12,588.9	856.3	25,760.3
	TOTAL	10,726.3	3,149.4	9,185.7	13,251.6	7,397.6	24.5	43,735.1	42,945.4	2,605.6	89,286.1
	5yr Avg	2,145.3	629.9	1,837.1	2,650.3	1,479.5	4.9	8,747.0	8,589.1	521.1	17,857.2
MANITOBA FOREST ZONE	1996	8,569.5	6,335.6	6,408.3	11,452.4	3,884.8	125.5	36,776.1	25,987.6	2,791.5	65,555.2
	1997	333.9	241.1	1,522.1	2,436.5	454.0	36.1	5,023.7	3,937.8	2,213.9	11,175.4
	1998	5,543.2	38,004.5	26,936.4	19,958.6	3,711.0	97.2	94,250.9	33,351.4	5,882.4	133,484.7
	1999	4,785.8	5,684.3	15,560.3	22,376.5	8,639.9	3,263.4	60,310.2	18,074.6	12,266.8	90,651.6
	2000	8,074.2	793.0	3,383.8	10,339.4	7,193.6	369.8	30,153.8	25,311.3	11,414.7	66,879.8
	TOTAL	27,306.6	51,058.5	53,810.9	66,563.4	23,883.3	3,892.0	226,514.7	106,662.7	34,569.3	367,746.7
	5yr Avg	5,461.3	10,211.7	10,762.2	13,312.7	4,776.7	778.4	45,302.9	21,332.5	6,913.9	73,549.3
TUNDRA/ TRANSITION ZONE	1996	1,104.5	641.8	434.4	463.2	0.0	0.0	2,643.9	56,694.4	432.4	59,770.7
	1997	50.5	0.0	1.2	25.9	0.0	0.0	77.6	27,508.2	3,033.6	30,619.4
	1998	24,027.6	16,839.1	8,815.4	6,336.9	0.0	0.0	56,019.0	251,843.9	9,226.8	317,089.7
	1999	643.2	0.6	6.5	325.9	0.0	0.0	976.2	18,750.5	74.8	19,801.5
	2000	230.8	0.0	5.2	135.6	0.0	0.0	371.6	43,518.4	154.0	44,044.0
	TOTAL	26,056.6	17,481.5	9,262.7	7,287.5	0.0	0.0	60,088.3	398,315.4	12,921.6	471,325.3
	5yr Avg	5,211.3	3,496.3	1,852.5	1,457.5	0.0	0.0	12,017.7	79,663.1	2,584.3	94,265.1
MANITOBA ALL ZONES	1996	9,674.0	6,977.4	6,842.7	11,915.6	3,884.8	125.5	39,420.0	82,682.0	3,223.9	125,325.9
	1997	384.4	241.1	1,523.3	2,462.4	454.0	36.1	5,101.3	31,446.0	5,247.5	41,794.8
	1998	29,570.8	54,843.6	35,751.8	26,295.5	3,711.0	97.2	150,269.9	285,195.3	15,109.2	450,574.4
	1999	5,429.0	5,684.9	15,566.8	22,702.4	8,639.9	3,263.4	61,286.4	36,825.1	12,341.6	110,453.1
	2000	8,305.0	793.0	3,389.0	10,475.0	7,193.6	369.8	30,525.4	68,829.7	11,568.7	110,923.8
	TOTAL	53,363.2	68,540.0	63,073.6	73,850.9	23,883.3	3,892.0	286,603.0	504,978.1	47,490.9	839,072.0
	5yr Avg	10,672.6	13,708.0	12,614.7	14,770.2	4,776.7	778.4	57,320.6	100,995.6	9,498.2	167,814.4

Table B11: Wildfire Merchantable Volume Losses By Forest Section All Status And Ownerships - 1996-2000 (in cubic metres)

FOREST SECTION	YEAR	JACK PINE	BLACK SPRUCE	WHITE SPRUCE	BALSAM FIR	TAMARACK LARCH	EASTERN CEDAR	TOTAL SOFTWOOD	TREMBLING ASPEN	BALSAM POPLAR	WHITE BIRCH	OTHER HARDWOOD	TOTAL HARDWOOD	TOTAL
ASPEN PARKLAND	1996	0	0	0	0	0	0	0	0	0	0	0	0	0
	1997	0	0	2,850	0	0	0	2,850	9,810	650	120	2,000	12,580	15,430
	1998	10	0	100	0	0	0	110	2,430	320	80	940	3,770	3,880
	1999	50	1,690	970	20	360	0	3,090	37,110	3,830	410	8,360	49,710	52,800
	2000	260	6,260	490	180	2,360	20	9,570	11,370	1,420	70	2,080	14,940	24,510
	TOTAL	320	7,950	4,410	200	2,720	20	15,620	60,720	6,220	680	13,380	81,000	96,620
	5yr Avg	64	1,590	882	40	544	4	3,124	12,144	1,244	136	2,676	16,200	19,324
MOUNTAIN	1996	740	2,950	11,610	1,730	350	80	17,460	14,340	6,980	3,190	1,920	26,430	43,890
	1997	60	1,100	1,340	1,660	90	0	4,250	2,530	1,650	510	360	5,050	9,300
	1998	40	1,780	1,820	130	1,940	0	5,710	9,940	2,190	600	150	12,880	18,590
	1999	5,190	5,360	11,450	1,160	1,380	0	24,540	129,370	40,370	7,430	2,550	179,720	204,260
	2000	20	0	70	0	0	0	90	530	150	30	20	730	820
	TOTAL	6,050	11,190	26,290	4,680	3,760	80	52,050	156,710	51,340	11,760	5,000	224,810	276,860
	5yr Avg	1,210	2,238	5,258	936	752	16	10,410	31,342	10,268	2,352	1,000	44,962	55,372
PINELAND	1996	920	130	40	30	0	0	1,120	1,180	230	50	30	1,490	2,610
	1997	240	410	20	0	250	0	920	600	70	30	0	700	1,620
	1998	1,410	1,190	210	50	3,280	90	6,230	1,040	160	60	30	1,290	7,520
	1999	28,870	5,820	1,030	620	4,660	100	41,100	18,040	3,380	1,780	1,360	24,560	65,660
	2000	4,650	1,010	130	200	160	20	6,170	4,240	820	250	120	5,430	11,600
	TOTAL	36,090	8,560	1,430	900	8,350	210	55,540	25,100	4,660	2,170	1,540	33,470	89,010
	5yr Avg	7,218	1,712	286	180	1,670	42	11,108	5,020	932	434	308	6,694	17,802
LAKE WINNIPEG EAST	1996	231,520	82,950	1,610	2,000	480	0	318,560	41,810	400	4,800	0	47,010	365,570
	1997	2,070	4,000	260	530	140	0	7,000	1,420	120	160	0	1,700	8,700
	1998	5,540	6,040	170	110	120	0	11,980	1,770	120	210	30	2,130	14,110
	1999	437,580	451,810	80,490	49,750	127,410	800	1,147,840	436,960	30,920	35,740	12,000	515,620	1,663,460
	2000	266,170	178,790	17,120	11,420	19,810	30	493,340	153,660	2,290	6,210	0	162,160	655,500
	TOTAL	942,880	723,590	99,650	63,810	147,960	830	1,978,720	635,620	33,850	47,120	12,030	728,620	2,707,340
	5yr Avg	188,576	144,718	19,930	12,762	29,592	166	395,744	127,124	6,770	9,424	2,406	145,724	541,468

Table B11: Wildfire Merchantable Volume Losses By Forest Section All Status And Ownerships - 1996-2000 (in cubic metres)

FOREST SECTION	YEAR	JACK PINE	BLACK SPRUCE	WHITE SPRUCE	BALSAM FIR	TAMARACK LARCH	EASTERN CEDAR	TOTAL SOFTWOOD	TREMBLING ASPEN	BALSAM POPLAR	WHITE BIRCH	OTHER HARDWOOD	TOTAL HARDWOOD	TOTAL
INTERLAKE	1996	80	270	650	60	80	0	1,140	22,970	1,410	510	240	25,130	26,270
	1997	110	530	510	120	80	0	1,350	8,250	780	170	30	9,230	10,580
	1998	1,320	540	850	160	20	0	2,890	38,290	2,080	670	630	41,670	44,560
	1999	860	1,280	3,680	580	10	0	6,410	64,480	4,560	2,140	770	71,950	78,360
	2000	300	1,630	1,570	1,500	170	0	5,170	30,270	2,740	1,540	180	34,730	39,900
	TOTAL	2,670	4,250	7,260	2,420	360	0	16,960	164,260	11,570	5,030	1,850	182,710	199,670
	5yr Avg	534	850	1,452	484	72	0	3,392	32,852	2,314	1,006	370	36,542	39,934
SASKATCHEWAN RIVER	1996	180	690	80	0	10	0	960	190	20	0	0	210	1,170
	1997	150	130	80	0	10	0	370	40	0	30	0	70	440
	1998	1,110	2,500	310	0	1,000	0	4,920	750	80	40	0	870	5,790
	1999	27,450	3,560	230	0	760	0	32,000	990	170	40	0	1,200	33,200
	2000	460	940	950	70	20	0	2,440	1,520	3,390	60	740	5,710	8,150
	TOTAL	29,350	7,820	1,650	70	1,800	0	40,690	3,490	3,660	170	740	8,060	48,750
	5yr Avg	5,870	1,564	330	14	360	0	8,138	698	732	34	148	1,612	9,750
HIGHROCK	1996	1,600	2,620	270	0	0	0	4,490	970	20	170	0	1,160	5,650
	1997	2,210	3,480	150	0	30	0	5,870	730	70	130	0	930	6,800
	1998	6,990	16,300	2,410	120	10	0	25,830	4,410	230	650	0	5,290	31,120
	1999	158,450	395,780	25,850	1,300	1,280	0	582,660	61,320	4,650	13,840	0	79,810	662,470
	2000	200	530	190	0	0	0	920	280	0	10	0	290	1,210
	TOTAL	169,450	418,710	28,870	1,420	1,320	0	619,770	67,710	4,970	14,800	0	87,480	707,250
	5yr Avg	33,890	83,742	5,774	284	264	0	123,954	13,542	994	2,960	0	17,496	141,450
CHURCHILL RIVER	1996	1,280	13,150	0	0	50	0	14,480	10	0	60	0	70	14,550
	1997	18,060	7,460	0	0	10	0	25,530	40	0	670	0	710	26,240
	1998	203,350	432,430	2,800	0	790	0	639,370	32,430	3,230	33,620	0	69,280	708,650
	1999	7,990	3,750	0	0	30	0	11,770	480	20	620	0	1,120	12,890
	2000	690	4,000	20	0	10	0	4,720	90	20	100	0	210	4,930
	TOTAL	231,370	460,790	2,820	0	890	0	695,870	33,050	3,270	35,070	0	71,390	767,260
	5yr Avg	46,274	92,158	564	0	178	0	139,174	6,610	654	7,014	0	14,278	153,452

Table B11: Wildfire Merchantable Volume Losses By Forest Section All Status And Ownerships - 1996-2000 (in cubic metres)

FOREST SECTION	YEAR	JACK PINE	BLACK SPRUCE	WHITE SPRUCE	BALSAM FIR	TAMARACK LARCH	EASTERN CEDAR	TOTAL SOFTWOOD	TREMBLING ASPEN	BALSAM POPLAR	WHITE BIRCH	OTHER HARDWOOD	TOTAL HARDWOOD	TOTAL
NELSON RIVER	1996	580	6,640	530	60	10	0	7,820	540	120	150	0	810	8,630
	1997	7,180	4,010	760	180	10	0	12,140	420	30	220	0	670	12,810
	1998	110	2,400	680	60	0	0	3,250	1,040	100	60	0	1,200	4,450
	1999	3,610	15,070	5,920	1,630	70	0	26,300	3,240	750	1,260	0	5,250	31,550
	2000	29,090	103,950	6,010	1,760	1,190	0	142,000	26,910	3,550	2,420	0	32,880	174,880
	TOTAL	40,570	132,070	13,900	3,690	1,280	0	191,510	32,150	4,550	4,110	0	40,810	232,320
	5yr Avg	8,114	26,414	2,780	738	256	0	38,302	6,430	910	822	0	8,162	46,464
HAYES RIVER	1996	309,680	347,750	9,450	5,760	430	0	673,070	67,520	3,210	18,010	0	88,740	761,810
	1997	28,750	15,120	800	440	20	0	45,130	2,730	440	1,230	0	4,400	49,530
	1998	106,490	89,290	840	1,310	70	0	198,000	22,840	2,570	5,630	0	31,040	229,040
	1999	123,540	85,050	3,370	2,660	120	0	214,740	66,100	11,110	13,280	0	90,490	305,230
	2000	209,230	338,260	16,750	13,530	510	0	578,280	117,610	18,290	29,670	0	165,570	743,850
	TOTAL	777,690	875,470	31,210	23,700	1,150	0	1,709,220	276,800	35,620	67,820	0	380,240	2,089,460
	5yr Avg	155,538	175,094	6,242	4,740	230	0	341,844	55,360	7,124	13,564	0	76,048	417,892
MANITOBA FOREST ZONE	1996	546,580	457,150	24,240	9,640	1,410	80	1,039,100	149,530	12,390	26,940	2,190	191,050	1,230,150
	1997	58,830	36,240	6,770	2,930	640	0	105,410	26,570	3,810	3,270	2,390	36,040	141,450
	1998	326,370	552,470	10,190	1,940	7,230	90	898,290	114,940	11,080	41,620	1,780	169,420	1,067,710
	1999	793,590	969,170	132,990	57,720	136,080	900	2,090,450	818,090	99,760	76,540	25,040	1,019,430	3,109,880
	2000	511,070	635,370	43,300	28,660	24,230	70	1,242,700	346,480	32,670	40,360	3,140	422,650	1,665,350
	TOTAL	2,236,440	2,650,400	217,490	100,890	169,590	1,140	5,375,950	1,455,610	159,710	188,730	34,540	1,838,590	7,214,540
	5yr Avg	447,288	530,080	43,498	20,178	33,918	228	1,075,190	291,122	31,942	37,746	6,908	367,718	1,442,908
TUNDRA/ TRANSITION ZONE	1996	4,440	1,560	0	0	0	0	6,000	0	0	60	0	60	6,060
	1997	30	830	0	0	0	0	860	0	0	30	0	30	890
	1998	64,980	7,190	0	0	0	0	72,170	0	0	410	0	410	72,580
	1999	380	11,020	30	0	10	0	11,440	50	0	410	0	460	11,900
	2000	120	4,710	0	0	0	0	4,830	10	0	200	0	210	5,040
	TOTAL	69,950	25,310	30	0	10	0	95,300	60	0	1,110	0	1,170	96,470
	5yr Avg	13,990	5,062	6	0	2	0	19,060	12	0	222	0	234	19,294
MANITOBA ALL ZONES	1996	551,020	458,710	24,240	9,640	1,410	80	1,045,100	149,530	12,390	27,000	2,190	191,110	1,236,210
	1997	58,860	37,070	6,770	2,930	640	0	106,270	26,570	3,810	3,300	2,390	36,070	142,340
	1998	391,350	559,660	10,190	1,940	7,230	90	970,460	114,940	11,080	42,030	1,780	169,830	1,140,290
	1999	793,970	980,190	133,020	57,720	136,090	900	2,101,890	818,140	99,760	76,950	25,040	1,019,890	3,121,780
	2000	511,190	640,080	43,300	28,660	24,230	70	1,247,530	346,490	32,670	40,560	3,140	422,860	1,670,390
	TOTAL	2,306,390	2,675,710	217,520	100,890	169,600	1,140	5,471,250	1,455,670	159,710	189,840	34,540	1,839,760	7,311,010
	5yr Avg	461,278	535,142	43,504	20,178	33,920	228	1,094,250	291,134	31,942	37,968	6,908	367,952	1,462,202

Table B12: Net Merchantable Annual Allowable Harvest Summary by Forest Management Unit/Forest Section and Species Provincial Crown Land (volume in cubic metres per year)

FOREST UNIT	ZONE	PHOTO YEAR	DATA	JACK PINE	BLACK SPRUCE	WHITE SPRUCE	BALSAM FIR	TAMARACK LARCH	EASTERN CEDAR	TOTAL SOFT WOOD	TREMBLING ASPEN	BALSAM POPLAR	WHITE BIRCH	OTHER HARD WOOD	TOTAL HARD WOOD	TOTAL
01	CLOSED	1983	PROV	0	10	140	0	0	0	150	1,430	220	60	440	2,150	2,300
	OPEN	1983	PROV	410	10	590	0	0	0	1,010	15,530	2,110	430	6,460	24,530	25,540
02	OPEN	1982	PROV	0	10	400	0	0	0	410	11,200	1,720	420	5,530	18,870	19,280
04	OPEN	1982	PROV	0	20	1,390	0	0	0	1,410	11,800	1,430	400	7,420	21,050	22,460
	RESTRICTED	1982	PROV	0	70	2,120	0	0	0	2,190	9,850	1,910	710	3,460	15,930	18,120
05	OPEN	1984	PROV	0	20	530	0	0	0	550	13,310	1,890	430	3,580	19,210	19,760
06	CLOSED	1988	PROV	0	0	0	0	0	0	0	16,470	190	50	1,550	18,260	18,260
	OPEN	1988	PROV	0	0	0	0	0	0	0	16,740	590	130	2,370	19,830	19,830
	OPEN	1988	PROV	0	10	250	0	0	0	260	8,840	990	270	2,170	12,270	12,530
ASPEN PARKLAND	CLOSED		PROV	0	10	140	0	0	0	150	17,900	410	110	1,990	20,410	20,560
	OPEN		PROV	410	70	3,160	0	0	0	3,640	77,420	8,730	2,080	27,530	115,760	119,400
	RESTRICTED		PROV	0	70	2,120	0	0	0	2,190	9,850	1,910	710	3,460	15,930	18,120
	TOTAL		PROV	410	150	5,420	0	0	0	5,980	105,170	11,050	2,900	32,980	152,100	158,080
10	OPEN	1980	FML 3	680	790	0	180	80	0	1,730	80,190	20,730	4,690	6,680	112,290	114,020
11	OPEN	1981	FML 3	2,930	12,950	2,450	840	1,310	0	20,480	86,890	35,370	9,940	6,670	138,870	159,350
12	OPEN	1981	FML 2-2	11,080	36,590	12,810	3,440	6,750	0	70,670	57,140	25,620	10,890	7,590	101,240	171,910
	OPEN	1981	FML 2-1	3,660	13,080	4,180	650	1,110	0	22,680	9,500	4,760	1,950	680	16,890	39,570
	S T OPEN		FML 2	14,740	49,670	16,990	4,090	7,860	0	93,350	66,640	30,380	12,840	8,270	118,130	211,480
13	CLOSED	1983	FML 3	1,960	4,270	1,830	110	10	0	8,180	14,800	3,020	940	0	18,760	26,940
	OPEN	1983	FML 3	54,660	93,510	42,800	7,880	370	0	199,220	387,110	81,790	31,770	950	501,620	700,840
	RESTRICTED	1983	FML 3	5,050	9,120	3,100	430	30	0	17,730	35,590	7,090	2,350	10	45,040	62,770
14	OPEN	1981	FML 2-2	39,580	67,700	13,970	4,870	190	0	126,310	123,440	32,820	13,960	960	171,180	297,490
MOUNTAIN	CLOSED		FML 3	1,960	4,270	1,830	110	10	0	8,180	14,800	3,020	940	0	18,760	26,940
	OPEN		FML 2-2	50,660	104,290	26,780	8,310	6,940	0	196,980	180,580	58,440	24,850	8,550	272,420	469,400
	OPEN		FML 2-1	3,660	13,080	4,180	650	1,110	0	22,680	9,500	4,760	1,950	680	16,890	39,570
	S T OPEN		FML 2	54,320	117,370	30,960	8,960	8,050	0	219,660	190,080	63,200	26,800	9,230	289,310	508,970
	S T OPEN		FML 3	58,270	107,250	45,250	8,900	1,760	0	221,430	554,190	137,890	46,400	14,300	752,780	974,210
	S T OPEN		ALL	112,590	224,620	76,210	17,860	9,810	0	441,090	744,270	201,090	73,200	23,530	1,042,090	1,483,180
	RESTRICTED		FML 3	5,050	9,120	3,100	430	30	0	17,730	35,590	7,090	2,350	10	45,040	62,770
	TOTAL		FML 2	54,320	117,370	30,960	8,960	8,050	0	219,660	190,080	63,200	26,800	9,230	289,310	508,970
	TOTAL		FML 3	65,280	120,640	50,180	9,440	1,800	0	247,340	604,580	148,000	49,690	14,310	816,580	1,063,920
	TOTAL		ALL	119,600	238,010	81,140	18,400	9,850	0	467,000	794,660	211,200	76,490	23,540	1,105,890	1,572,890

Net Merchantable Annual Allowable Harvest reflects the latest product technology and highest level of fiber utilization. Utilization levels vary throughout the Province.

Table B12: Net Merchantable Annual Allowable Harvest Summary by Forest Management Unit/Forest Section and Species Provincial Crown Land (volume in cubic metres per year)

FOREST UNIT	ZONE	PHOTO YEAR	DATA	JACK PINE	BLACK SPRUCE	WHITE SPRUCE	BALSAM FIR	TAMARACK LARCH	EASTERN CEDAR	TOTAL SOFT WOOD	TREMBLING ASPEN	BALSAM POPLAR	WHITE BIRCH	OTHER HARD WOOD	TOTAL HARD WOOD	TOTAL
20	OPEN	1988	PROV	69,720	78,610	11,580	8,060	29,690	2,830	200,490	131,710	31,390	14,000	4,740	181,840	382,330
23	CLOSED	1989	PROV	1,300	80	140	80	10	20	1,630	1,570	360	130	60	2,120	3,750
	OPEN	1989	PROV	10,760	14,330	2,970	2,180	2,660	520	33,420	25,760	6,180	2,770	1,460	36,170	69,590
PINELAND	CLOSED		PROV	1,300	80	140	80	10	20	1,630	1,570	360	130	60	2,120	3,750
	OPEN		PROV	80,480	92,940	14,550	10,240	32,350	3,350	233,910	157,470	37,570	16,770	6,200	218,010	451,920
	TOTAL			81,780	93,020	14,690	10,320	32,360	3,370	235,540	159,040	37,930	16,900	6,260	220,130	455,670
30	CLOSED	1989	PROV	10,570	6,010	2,580	800	180	70	20,210	16,220	1,770	1,320	260	19,570	39,780
	OPEN	1989	PROV	51,540	28,710	8,830	2,720	2,430	270	94,500	43,870	3,610	4,030	2,190	53,700	148,200
	RESTRICTED	1989	PROV	750	130	160	20	0	0	1,060	1,090	70	100	20	1,280	2,340
31	CLOSED	1986	FML 1	7,270	6,880	920	380	220	0	15,670	3,500	170	380	40	4,090	19,760
	OPEN	1986	FML 1	119,970	69,720	19,490	5,470	13,410	0	228,060	88,320	7,150	8,530	3,910	107,910	335,970
	RESTRICTED	1986	FML 1	15,950	9,190	2,880	850	190	0	29,060	9,090	670	920	150	10,830	39,890
35	OPEN	1985	FML 1	11,640	11,240	1,380	530	990	0	25,780	6,820	240	440	0	7,500	33,280
	OPEN	1985	IWSA 1	32,440	23,530	3,020	1,000	2,520	0	62,510	12,680	380	980	0	14,020	76,530
	CLOSED	1985	PROV	31,100	20,490	3,500	1,160	1,350	0	57,600	15,270	380	1,110	0	16,760	74,360
	S T OPEN			44,080	34,770	4,400	1,530	3,510	0	88,290	19,500	600	1,420	0	21,520	109,810
36	CLOSED	1986	PROV	35,480	23,230	2,120	850	320	0	62,000	16,190	340	1,310	0	17,840	79,840
	OPEN	1986	PROV	24,000	20,340	2,510	990	330	0	48,170	14,440	380	1,310	0	16,110	64,280
37	OPEN	1986	PROV	83,200	62,390	3,440	1,060	2,280	0	152,370	31,160	630	2,770	0	34,560	186,950
	OPEN	1986	IWSA 1	2,270	3,110	180	60	100	0	5,700	520	20	70	0	610	6,310
	S T OPEN			85,470	65,500	3,600	1,120	2,380	0	158,070	31,700	650	2,840	0	35,190	193,260
38	CLOSED	1985	IWSA 1	1,370	600	60	20	10	0	2,060	630	20	40	0	690	2,750
	OPEN	1985	IWSA 1	58,030	56,150	8,300	2,970	3,130	0	128,580	35,970	1,030	2,450	20	39,470	168,050
39	OPEN	1985	PROV	28,170	33,210	2,810	920	950	0	66,060	36,310	840	1,170	0	38,320	104,380
	OPEN	1985	IWSA 1	13,340	13,230	1,180	390	480	0	28,620	13,690	320	440	0	14,450	43,070
	S T OPEN			41,510	46,440	3,990	1,310	1,430	0	94,680	50,000	1,160	1,610	0	52,770	147,450
LAKE	CLOSED		PROV	77,150	49,730	8,200	2,810	1,850	70	139,810	47,680	2,490	3,740	260	54,170	193,980
WINNIPEG	CLOSED		FML 1	7,270	6,880	920	380	220	0	15,670	3,500	170	380	40	4,090	19,760
EAST	CLOSED		IWSA 1	1,370	600	60	20	10	0	2,060	630	20	40	0	690	2,750
	S T CLOSED			85,790	57,210	9,180	3,210	2,080	70	157,540	51,810	2,680	4,160	300	58,950	216,490
	OPEN		PROV	186,910	144,650	17,590	5,690	5,990	270	361,100	125,800	5,440	9,280	2,190	142,710	503,810
	OPEN		FML 1	131,610	80,960	20,870	6,000	14,400	0	253,840	95,140	7,390	8,970	3,910	115,410	369,250
	OPEN		IWSA 1	106,080	96,020	12,660	4,420	6,230	0	225,410	62,860	1,730	3,940	20	68,550	293,960
	S T OPEN			424,600	321,630	51,120	16,110	26,620	270	840,350	283,800	14,560	22,190	6,120	326,670	1,167,020
	RESTRICTED		PROV	750	130	160	20	0	0	1,060	1,090	70	100	20	1,280	2,340
	RESTRICTED		FML 1	15,950	9,190	2,880	850	190	0	29,060	9,090	670	920	150	10,830	39,890
	S T RESTRICTED			16,700	9,320	3,040	870	190	0	30,120	10,180	740	1,020	170	12,110	42,230
	TOTAL			527,090	388,160	63,340	20,190	28,890	340	1,028,010	345,790	17,980	27,370	6,590	397,730	1,425,740

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Table B12: Net Merchantable Annual Allowable Harvest Summary by Forest Management Unit/Forest Section and Species Provincial Crown Land (volume in cubic metres per year)

FOREST UNIT	ZONE	PHOTO YEAR	DATA	JACK PINE	BLACK SPRUCE	WHITE SPRUCE	BALSAM FIR	TAMARACK LARCH	EASTERN CEDAR	TOTAL SOFT WOOD	TREMBLING ASPEN	BALSAM POPLAR	WHITE BIRCH	OTHER HARD WOOD	TOTAL HARD WOOD	TOTAL
40	CLOSED	1992	PROV	1,610	4,630	3,880	4,070	100	0	14,290	11,260	2,540	3,820	20	17,640	31,930
	OPEN	1992	IWSA 2	5,280	7,140	4,730	3,260	210	0	20,620	37,260	4,680	3,750	110	45,800	66,420
41	OPEN	1992	IWSA 2	6,460	9,490	5,070	3,690	280	0	24,990	34,060	4,650	4,130	130	42,970	67,960
42	OPEN	1981	PROV	2,950	270	2,370	0	20	0	5,610	52,090	5,200	1,390	150	58,830	64,440
43	OPEN	1980	PROV	18,890	10,700	11,100	1,490	350	10	42,540	90,550	10,800	5,830	620	107,800	150,340
45	OPEN	1993	FML 2-2	50,820	20,800	8,170	2,900	3,640	20	86,350	42,690	5,040	4,750	130	52,610	138,960
	OPEN	1993	IWSA 2	42,200	30,480	7,920	3,960	5,630	50	90,240	59,170	6,120	5,300	300	70,890	161,130
	S T OPEN	1993		93,020	51,280	16,090	6,860	9,270	70	176,590	101,860	11,160	10,050	430	123,500	300,090
46	OPEN	1993	FML 2-2	60,640	26,020	8,460	3,230	2,550	40	100,940	57,010	5,970	5,280	190	68,450	169,390
47	OPEN	1980	FML 2-2&1	19,410	19,440	4,520	2,480	380	40	46,270	7,780	1,990	3,020	0	12,790	59,060
INTERLAKE	CLOSED		PROV	1,610	4,630	3,880	4,070	100	0	14,290	11,260	2,540	3,820	20	17,640	31,930
	OPEN		PROV	21,840	10,970	13,470	1,490	370	10	48,150	142,640	16,000	7,220	770	166,630	214,780
	OPEN		IWSA 2	53,940	47,110	17,720	10,910	6,120	50	135,850	130,490	15,450	13,180	540	159,660	295,510
	OPEN		FML 2-2	130,870	66,260	21,150	8,610	6,570	100	233,560	107,480	13,000	13,050	320	133,850	367,410
	S T OPEN		ALL	206,650	124,340	52,340	21,010	13,060	160	417,560	380,610	44,450	33,450	1,630	460,140	877,700
	TOTAL			208,260	128,970	56,220	25,080	13,160	160	431,850	391,870	46,990	37,270	1,650	477,780	909,630
51	OPEN	1982	FML 2-1&2	85,590	45,900	9,280	350	990	0	142,110	17,080	2,110	3,110	0	22,300	164,410
52	OPEN	1982	FML 2-1	10,160	17,650	5,190	210	330	0	33,540	13,380	11,930	1,170	4,610	31,090	64,630
53	OPEN	1982	FML 2-1	102,990	53,440	24,330	930	530	0	182,220	55,640	6,520	6,610	500	69,270	251,490
54	OPEN	1982	FML 2-1	3,640	10,840	1,130	30	190	0	15,830	970	220	220	0	1,410	17,240
55	OPEN	1982	FML 2-1	15,840	19,120	4,610	190	220	0	39,980	8,360	3,570	1,030	700	13,660	53,640
56	OPEN	1982	FML 2-1	26,560	44,740	22,860	950	560	0	95,670	44,100	11,870	5,020	2,200	63,190	158,860
57	CLOSED	1982	PROV	1,270	1,050	190	0	20	0	2,530	240	40	50	0	330	2,860
	OPEN	1982	PROV	6,530	16,580	6,210	350	200	0	29,870	4,550	740	1,030	0	6,320	36,190
	RESTRICTED	1982	PROV	130	820	730	30	10	0	1,720	310	50	240	0	600	2,320
SASKATCHEWAN RIVER	CLOSED		PROV	1,270	1,050	190	0	20	0	2,530	240	40	50	0	330	2,860
	OPEN		PROV	6,530	16,580	6,210	350	200	0	29,870	4,550	740	1,030	0	6,320	36,190
	OPEN		FML 2-1	244,780	191,690	67,400	2,660	2,820	0	509,350	139,530	36,220	17,160	8,010	200,920	710,270
	S T OPEN		ALL	251,310	208,270	73,610	3,010	3,020	0	539,220	144,080	36,960	18,190	8,010	207,240	746,460
	RESTRICTED		PROV	130	820	730	30	10	0	1,720	310	50	240	0	600	2,320
	TOTAL			252,710	210,140	74,530	3,040	3,050	0	543,470	144,630	37,050	18,480	8,010	208,170	751,640

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Table B12: Net Merchantable Annual Allowable Harvest Summary by Forest Management Unit/Forest Section and Species Provincial Crown Land (volume in cubic metres per year)

FOREST UNIT	ZONE	PHOTO YEAR	DATA	JACK PINE	BLACK SPRUCE	WHITE SPRUCE	BALSAM FIR	TAMARACK LARCH	EASTERN CEDAR	TOTAL SOFT WOOD	TREMBLING ASPEN	BALSAM POPLAR	WHITE BIRCH	OTHER HARD WOOD	TOTAL HARD WOOD	TOTAL
60	CLOSED	1983	FML 2-1	10,680	26,880	9,890	500	70	0	48,020	15,400	1,300	2,140	0	18,840	66,860
	OPEN	1983	FML 2-1	11,170	14,950	3,880	180	30	0	30,210	8,360	530	1,390	0	10,280	40,490
61	OPEN	1988	FML 2-1	10,390	32,570	7,820	340	130	0	51,250	16,000	1,290	2,110	0	19,400	70,650
62	OPEN	1983	FML 2-1	50,890	74,940	16,970	770	90	0	143,660	26,180	2,110	5,610	0	33,900	177,560
63	OPEN	1983	FML 2-1	52,720	84,800	17,270	700	80	0	155,570	37,180	2,740	5,970	0	45,890	201,460
64	OPEN	1987	FML 2-1	71,890	140,820	20,730	750	200	0	234,390	51,940	4,150	8,390	0	64,480	298,870
65	OPEN	1988	FML 2-1	37,960	78,870	10,110	440	230	0	127,610	18,910	1,550	4,180	0	24,640	152,250
66	OPEN	1988	FML 2-1	28,870	67,570	11,160	430	110	0	108,140	28,100	2,160	3,840	0	34,100	142,240
HIGHROCK	CLOSED		FML 2-1	10,680	26,880	9,890	500	70	0	48,020	15,400	1,300	2,140	0	18,840	66,860
	OPEN		FML 2-1	263,890	494,520	87,940	3,610	870	0	850,830	186,670	14,530	31,490	0	232,690	1,083,520
	TOTAL			274,570	521,400	97,830	4,110	940	0	898,850	202,070	15,830	33,630	0	251,530	1,150,380
71	OPEN	1975	PROV	59,860	39,800	330	0	0	0	99,990	4,510	430	5,850	0	10,790	110,780
72	OPEN	1969	PROV	30,210	78,440	800	90	0	0	109,540	7,440	1,340	5,330	0	14,110	123,650
73	OPEN	1975	PROV	7,290	23,810	170	20	0	0	31,290	100	0	860	0	960	32,250
74	OPEN	1975	PROV	2,240	820	0	0	0	0	3,060	0	0	0	0	0	3,060
75	OPEN	1969	PROV	0	9,430	0	0	0	0	9,430	0	0	0	0	0	9,430
CHURCHILL RIVER	TOTAL			99,600	152,300	1,300	110	0	0	253,310	12,050	1,770	12,040	0	25,860	279,170

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FOREST UNIT	ZONE	PHOTO YEAR	DATA	JACK PINE	BLACK SPRUCE	WHITE SPRUCE	BALSAM FIR	TAMARACK LARCH	EASTERN CEDAR	TOTAL SOFT WOOD	TREMBLING ASPEN	BALSAM POPLAR	WHITE BIRCH	OTHER HARD WOOD	TOTAL HARD WOOD	TOTAL
82	OPEN	1990	PROV	27,740	97,390	19,260	2,400	310	0	147,100	28,070	3,880	4,300	0	36,230	183,330
83	OPEN	1966	FML 2-1	54,710	144,690	35,970	4,070	290	0	239,730	74,230	7,960	9,270	0	91,460	331,190
	OPEN	*1986	INCO	1,160	4,620	1,050	140	10	0	6,980	1,220	170	190	0	1,580	8,560
	S T OPEN			55,870	149,310	37,020	4,210	300	0	246,710	75,450	8,130	9,460	0	93,040	339,750
84	OPEN	1986	FML 2-1	48,930	129,110	28,320	3,310	210	0	209,880	54,230	6,550	7,870	0	68,650	278,530
	OPEN	1986	INCO	1,370	5,220	990	100	0	0	7,680	3,180	270	320	0	3,770	11,450
	S T OPEN			50,300	134,330	29,310	3,410	210	0	217,560	57,410	6,820	8,190	0	72,420	289,980
85	CLOSED	1986	FML 2-1	240	3,780	930	190	0	0	5,140	340	60	150	0	550	5,690
	OPEN	1986	FML 2-1	28,240	102,760	13,680	1,410	160	0	146,250	33,330	4,010	4,540	0	41,880	188,130
	OPEN	1986	INCO	3,800	5,120	970	70	10	0	9,970	4,010	370	430	0	4,810	14,780
	S T OPEN			32,040	107,880	14,650	1,480	170	0	156,220	37,340	4,380	4,970	0	46,690	202,910
	RESTRICTED	1986	FML 2-1	190	4,050	840	150	0	0	5,230	860	100	130	0	1,090	6,320
86	OPEN	1992	PROV	2,900	9,910	1,140	110	20	0	14,080	2,940	370	340	0	3,650	17,730
87	OPEN	1986	FML 2-1	41,390	91,880	10,200	820	260	0	144,550	31,190	4,150	4,100	0	39,440	183,990
	OPEN	1986	INCO	6,520	12,220	1,240	70	30	0	20,080	6,000	650	650	0	7,300	27,380
	S T OPEN			47,910	104,100	11,440	890	290	0	164,630	37,190	4,800	4,750	0	46,740	211,370
88	OPEN	1992	PROV	4,870	7,350	2,180	140	20	0	14,560	7,430	710	580	0	8,720	23,280
89	OPEN	1991	FML 2-1	6,400	40,820	6,570	590	200	0	54,580	17,290	1,960	1,480	0	20,730	75,310
	OPEN	1991	INCO	560	5,910	250	20	10	0	6,750	370	100	100	0	570	7,320
	S T OPEN			6,960	46,730	6,820	610	210	0	61,330	17,660	2,060	1,580	0	21,300	82,630
NELSON RIVER	CLOSED		FML 2-1	240	3,780	930	190	0	0	5,140	340	60	150	0	550	5,690
	OPEN		PROV	35,510	114,650	22,580	2,650	350	0	175,740	38,440	4,940	5,220	0	48,600	224,340
	OPEN		FML 2-1	179,670	509,260	94,740	10,200	1,120	0	794,990	210,270	24,630	27,260	0	262,160	1,057,150
	OPEN		INCO	13,410	33,090	4,500	400	60	0	51,460	14,780	1,560	1,690	0	18,030	69,490
	S T OPEN			228,590	657,000	121,820	13,250	1,530	0	1,022,190	263,490	31,130	34,170	0	328,790	1,350,980
	RESTRICTED		FML 2-1	190	4,050	840	150	0	0	5,230	860	100	130	0	1,090	6,320
	TOTAL			229,020	664,830	123,590	13,590	1,530	0	1,032,560	264,690	31,290	34,450	0	330,430	1,362,990
90	OPEN	1973 AF	PROV	150,660	149,020	11,840	6,960	180	0	318,660	84,490	20,060	15,740	0	120,290	438,950
91	OPEN	1973 AF	PROV	40,360	47,000	2,030	800	90	0	90,280	19,030	940	3,690	0	23,660	113,940
92	OPEN	1973 AF	PROV	41,650	64,410	2,850	1,180	190	0	110,280	21,300	1,050	4,190	0	26,540	136,820
93	OPEN	1973 AF	PROV	37,650	28,270	3,380	1,330	30	0	70,660	14,170	630	3,030	0	17,830	88,490
94	OPEN	1969 AF	PROV	32,740	20,380	2,190	530	20	0	55,860	11,930	840	2,140	0	14,910	70,770
95	OPEN	1973 AF	PROV	51,870	32,830	3,470	1,360	20	0	89,550	31,720	1,360	4,810	0	37,890	127,440
96	OPEN	1973 AF	PROV	44,930	46,320	3,200	1,840	20	0	96,310	20,440	1,650	4,800	0	26,890	123,200
97	OPEN	1973 AF	PROV	75,560	68,560	1,140	760	70	0	146,090	19,890	1,750	5,150	0	26,790	172,880
98	OPEN	1973 AF	PROV	16,570	11,750	170	100	20	0	28,610	3,030	320	780	0	4,130	32,740
99	OPEN	1969 AF	PROV	12,970	17,070	480	130	10	0	30,660	3,300	340	760	0	4,400	35,060
HAYES RIVER	TOTAL			504,960	485,610	30,750	14,990	650	0	1,036,960	229,300	28,940	45,090	0	303,330	1,340,290

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FOREST UNIT	ZONE	PHOTO YEAR	DATA	JACK PINE	BLACK SPRUCE	WHITE SPRUCE	BALSAM FIR	TAMARACK LARCH	EASTERN CEDAR	TOTAL SOFT WOOD	TREMBLING ASPEN	BALSAM POPLAR	WHITE BIRCH	OTHER HARD WOOD	TOTAL HARD WOOD	TOTAL
MANITOBA FOREST ZONE	CLOSED		PROV	81,330	55,500	12,550	6,960	1,980	90	158,410	78,650	5,840	7,850	2,330	94,670	253,080
	CLOSED		FML 1	7,270	6,880	920	380	220	0	15,670	3,500	170	380	40	4,090	19,760
	CLOSED		IWSA 1	1,370	600	60	20	10	0	2,060	630	20	40	0	690	2,750
	CLOSED		FML 2-1	10,920	30,660	10,820	690	70	0	53,160	15,740	1,360	2,290	0	19,390	72,550
	CLOSED		FML 3	1,960	4,270	1,830	110	10	0	8,180	14,800	3,020	940	0	18,760	26,940
	SUB TOTAL CLOSED			102,850	97,910	26,180	8,160	2,290	90	237,480	113,320	10,410	11,500	2,370	137,600	375,080
	OPEN		PROV	936,240	1,017,770	109,610	35,520	39,910	3,630	2,142,680	787,670	104,130	98,730	36,690	1,027,220	3,169,900
	OPEN		FML 1	131,610	80,960	20,870	6,000	14,400	0	253,840	95,140	7,390	8,970	3,910	115,410	369,250
	OPEN		IWSA 1	106,080	96,020	12,660	4,420	6,230	0	225,410	62,860	1,730	3,940	20	68,550	293,960
	OPEN		IWSA 2	53,940	47,110	17,720	10,910	6,120	50	135,850	130,490	15,450	13,160	540	159,660	295,510
	OPEN		ST IWSA	160,020	143,130	30,380	15,330	12,350	50	361,260	193,350	17,180	17,120	560	228,210	589,470
	OPEN		FML 2-1	692,000	1,208,550	254,260	17,120	5,920	0	2,177,850	545,970	80,140	77,660	8,690	712,660	2,890,510
	OPEN		FML 2-2	181,530	170,550	47,930	16,920	13,510	100	430,540	288,060	71,440	37,900	8,870	406,270	836,810
	OPEN		ST FML 2	873,530	1,379,100	302,190	34,040	19,430	100	2,608,390	834,030	151,580	115,760	17,560	1,118,930	3,727,320
	OPEN		FML 3	56,270	107,250	45,250	8,900	1,760	0	221,430	554,190	137,890	46,400	14,300	752,780	974,210
	OPEN		INCO	13,410	33,090	4,500	400	80	0	51,460	14,760	1,560	1,690	0	18,030	69,490
	SUB TOTAL OPEN			2,173,080	2,761,300	512,800	100,190	87,910	3,780	5,639,060	2,479,160	419,730	288,670	73,020	3,260,580	8,899,640
	RESTRICTED		PROV	880	1,020	3,010	50	10	0	4,970	11,250	2,030	1,050	3,480	17,810	22,780
	RESTRICTED		FML 1	15,950	9,190	2,880	850	190	0	29,060	9,090	670	920	150	10,830	39,890
	RESTRICTED		FML 2-1	190	4,050	840	150	0	0	5,230	860	100	130	0	1,090	6,320
	RESTRICTED		FML 3	5,050	9,120	3,100	430	30	0	17,730	35,590	7,090	2,350	10	45,040	62,770
	SUB TOTAL RESTRICTED			22,070	23,380	9,830	1,480	230	0	56,990	56,790	9,890	4,450	3,640	74,770	131,760
	TOTAL			2,298,000	2,882,590	548,810	109,830	90,430	3,870	5,933,530	2,649,270	440,030	304,620	79,030	3,472,950	9,406,480

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Table B13: ANNUAL FOREST PRODUCT HARVEST 1996 - 2001 (in cubic metres)

FOREST SECTION	YEAR	XMAS TREES (number)	LUMBER								PULPWOOD								
			SPRUCE	JACK PINE	OTHER SOFT WOOD	TOTAL SOFT WOOD	POPLAR	OTHER HARD WOOD	TOTAL HARD WOOD	TOTAL LUMBER	SPRUCE	OTHER SOFT WOOD	JACK PINE	SOFT WOOD CHIPS	TOTAL SOFT WOOD	POPLAR	OTHER HARD WOOD	TOTAL HARD WOOD	TOTAL PULPWOOD
ASPEN PARKLAND	1996/97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1997/98	380	440	15	0	455	432	0	432	887	0	0	0	0	0	0	0	0	0
	1998/99	430	443	75	0	518	112	4	116	634	122	0	0	0	122	0	0	0	122
	1999/2000	329	509	0	0	509	220	8	228	737	19	0	801	0	820	0	0	0	820
	2000/2001	332	50	0	0	50	140	30	170	220	0	0	0	0	0	0	0	0	0
	5 YEAR TOTAL	1,471	1,442	90	0	1,532	904	42	946	2,478	141	0	801	0	942	0	0	0	942
	5 YEAR AVERAGE	294.2	288.4	18.0	0.0	306.4	180.8	8.4	189.2	495.6	28.2	0.0	160.2	0.0	188.4	0.0	0.0	0.0	188.4
MOUNTAIN	1996/97	544	148,949	18,665	967	168,581	45,857	489	46,346	214,927	61,814	0	8,131	67,055	137,000	394,628	0	394,628	531,628
	1997/98	253	149,997	35,724	0	185,721	22,096	344	22,440	208,161	55,203	0	19,348	85,876	160,427	450,283	0	450,283	610,710
	1998/99	194	155,916	36,663	309	192,888	28,213	1,823	30,036	222,924	84,244	0	32,559	35,190	151,993	591,677	0	591,677	743,670
	1999/2000	185	133,012	22,841	6	155,859	23,690	508	24,198	180,057	53,651	0	15,226	56,727	125,604	446,833	14,082	460,915	586,519
	2000/2001	155	172,058	16,473	36	188,567	30,676	2,202	32,878	221,445	85,707	0	3,822	48,186	137,715	501,771	9,867	511,638	649,353
	5 YEAR TOTAL	1,331	759,932	130,366	1,318	891,616	150,532	5,366	155,898	1,047,514	340,619	0	79,086	293,034	712,739	2,385,192	23,949	2,409,141	3,121,880
	5 YEAR AVERAGE	266.2	151,986.4	26,073.2	263.6	178,323.2	30,106.4	1,073.2	31,179.6	209,502.8	68,123.8	0.0	15,817.2	58,606.8	142,547.8	477,038.4	4,789.8	481,828.2	624,376.0
PINELAND	1996/97	249	3,668	15,692	372	19,732	6,784	0	6,784	26,516	56,558	232	28,935	0	85,725	43,052	0	43,052	128,777
	1997/98	1,812	1,783	23,839	708	26,330	11,446	63	11,509	37,839	56,014	1,091	32,998	0	90,103	51,040	0	51,040	141,143
	1998/99	1,416	4,732	25,232	559	30,523	13,407	419	13,826	44,349	63,865	1,978	29,429	0	95,272	49,646	150	49,796	145,068
	1999/2000	2,313	4,135	29,934	223	34,292	13,428	100	13,528	47,820	67,960	5,143	27,342	0	100,445	64,932	490	65,422	165,867
	2000/2001	1,197	3,047	22,074	475	25,596	10,338	0	10,338	35,934	71,966	2,838	31,477	0	106,281	58,812	715	59,527	165,808
	5 YEAR TOTAL	6,987	17,365	116,771	2,337	136,473	55,403	582	55,985	192,458	316,363	11,282	150,181	0	477,826	267,482	1,355	268,837	746,663
	5 YEAR AVERAGE	1,397.4	3,473.0	23,354.2	467.4	27,294.6	11,080.6	116.4	11,197.0	38,491.6	63,272.6	2,256.4	30,036.2	0.0	95,565.2	53,496.4	271.0	53,767.4	149,332.6
LAKE WINNIPEG EAST	1996/97	1,219	1,629	12,401	3,748	17,778	4,206	0	4,206	21,984	179,856	3,087	57,143	0	240,086	15,370	0	15,370	255,456
	1997/98	15	1,844	5,192	10	7,046	1,630	824	2,454	9,500	152,481	0	35,476	0	187,957	1,495	0	1,495	189,452
	1998/99	11	5,851	6,074	70	11,995	2,176	0	2,176	14,171	114,645	140	61,257	0	176,042	2,160	0	2,160	178,202
	1999/2000	10	4,205	15,269	1,390	20,864	3,073	0	3,073	23,937	146,343	0	38,676	0	185,019	4,426	0	4,426	189,445
	2000/2001	500	3,350	12,287	34	15,671	1,804	0	1,804	17,475	119,189	1,998	82,622	0	203,809	6,767	210	6,977	210,786
	5 YEAR TOTAL	1,755	16,879	51,223	5,252	73,354	12,889	824	13,713	87,067	712,514	5,225	275,174	0	992,913	30,218	210	30,428	1,023,341
	5 YEAR AVERAGE	351.0	3,375.8	10,244.6	1,050.4	14,670.8	2,577.8	164.8	2,742.6	17,413.4	142,502.8	1,045.0	55,034.8	0.0	198,582.6	6,043.6	42.0	6,085.6	204,668.2
INTERLAKE	1996/97	145	8,178	8,030	0	16,208	5,818	0	5,818	22,026	37,429	50	7,607	0	45,086	8,684	0	8,684	53,770
	1997/98	62	26,240	33,157	0	59,397	1,517	1,654	3,171	62,568	39,495	1,394	32,822	0	73,711	129	0	129	73,840
	1998/99	30	23,217	27,232	5	50,454	3,938	62	4,000	54,454	47,188	0	33,701	0	80,889	1,033	0	1,033	81,922
	1999/2000	266	18,852	22,389	8	41,249	873	0	873	42,122	33,366	0	32,888	0	66,254	3,599	0	3,599	69,853
	2000/2001	46	8,411	8,866	12	17,289	1,907	0	1,907	19,196	23,717	0	13,841	0	37,558	4,723	0	4,723	42,281
	5 YEAR TOTAL	549	84,898	99,674	25	184,597	14,053	1,716	15,769	200,366	181,195	1,444	120,859	0	303,498	18,168	0	18,168	321,666
	5 YEAR AVERAGE	109.8	16,979.6	19,934.8	5.0	36,919.4	2,810.6	343.2	3,153.8	40,073.2	36,239.0	288.8	24,171.8	0.0	60,699.6	3,633.6	0.0	3,633.6	64,333.2
SASKATCHEWAN RIVER	1996/97	6	41,656	58,260	0	99,916	2,453	0	2,453	102,369	32,212	0	47,869	6,886	86,967	746	0	746	87,713
	1997/98	4	71,325	64,808	0	136,133	17,589	25	17,614	153,747	45,496	0	63,525	0	109,021	0	0	0	109,021
	1998/99	6	56,680	56,485	0	113,165	925	0	925	114,090	56,705	0	66,953	0	123,658	0	0	0	123,658
	1999/2000	3	50,706	62,703	0	113,409	0	0	0	113,409	67,931	0	93,081	0	161,012	468	0	468	161,480
	2000/2001	3	43,679	57,565	0	101,244	0	0	0	101,244	81,362	0	86,356	223	167,941	16,634	0	16,634	184,575
	5 YEAR TOTAL	22	264,046	299,821	0	563,867	20,967	25	20,992	584,859	283,706	0	357,784	7,109	648,599	17,848	0	17,848	666,447
	5 YEAR AVERAGE	4.4	52,809.2	59,964.2	0.0	112,773.4	4,193.4	5.0	4,198.4	116,971.8	56,741.2	0.0	71,556.8	1,421.8	129,719.8	3,569.6	0.0	3,569.6	133,289.4

Table B13: ANNUAL FOREST PRODUCT HARVEST 1996 - 2001 (in cubic metres) Cont'd

FOREST SECTION	YEAR	XMAS TREES (number)	LUMBER								PULPWOOD								
			SPRUCE	JACK PINE	OTHER SOFT WOOD	TOTAL SOFT WOOD	POPLAR	OTHER HARD WOOD	TOTAL HARD WOOD	TOTAL LUMBER	SPRUCE	OTHER SOFT WOOD	JACK PINE	SOFT WOOD CHIPS	TOTAL SOFT WOOD	POPLAR	OTHER HARD WOOD	TOTAL HARD WOOD	TOTAL PULPWOOD
HIGHROCK	1996/97	10	60,946	85,238	0	146,184	3,589	0	3,589	149,773	47,129	0	70,036	10,075	127,240	1,092	0	1,092	128,332
	1997/98	0	61,720	67,987	0	129,707	0	0	0	129,707	44,427	0	66,640	6,007	117,074	0	0	0	117,074
	1998/99	0	38,060	46,727	0	84,787	25	0	25	84,812	47,305	0	55,375	0	102,680	0	0	0	102,680
	1999/2000	0	24,145	34,501	0	58,646	4	0	4	58,650	37,582	0	51,752	8,253	97,587	0	0	0	97,587
	2000/2001	0	26,051	36,969	0	63,020	21	0	21	63,041	64,402	0	56,327	0	120,729	1,062	0	1,062	121,791
	5 YEAR TOTAL	10	210,922	271,422	0	482,344	3,639	0	3,639	485,983	240,845	0	300,130	24,335	565,310	2,154	0	2,154	567,464
	5 YEAR AVERAGE	2.0	42,184.4	54,284.4	0.0	96,468.8	727.8	0.0	727.8	97,196.6	48,169.0	0.0	60,026.0	4,867.0	113,062.0	430.8	0.0	430.8	113,492.8
CHURCHILL RIVER	1996/97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1997/98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1998/99	0	0	0	0	0	18	0	18	18	0	28	0	0	28	0	0	0	28
	1999/2000	0	0	45	0	45	0	0	0	45	4,708	0	6,303	0	11,011	0	0	0	11,011
	2000/2001	0	0	0	0	0	0	0	0	0	6,410	0	4,910	0	11,320	0	0	0	11,320
	5 YEAR TOTAL	0	0	45	0	45	18	0	18	63	11,118	28	11,213	0	22,359	0	0	0	22,359
	5 YEAR AVERAGE	0.0	0.0	9.0	0.0	9.0	3.6	0.0	3.6	12.6	2,223.6	5.6	2,242.6	0.0	4,471.8	0.0	0.0	0.0	4,471.8
NELSON RIVER	1996/97	80	51,968	81,596	0	133,564	375	0	375	133,939	41,310	0	65,003	82,560	188,873	1,030	0	1,030	189,903
	1997/98	0	31,926	47,924	0	79,850	300	0	300	80,150	31,441	0	46,909	76,943	155,293	156	0	156	155,449
	1998/99	0	63,977	73,780	0	137,757	915	2	917	138,674	93,431	0	88,532	18,134	200,097	469	0	469	200,566
	1999/2000	0	71,433	89,815	0	161,248	551	0	551	161,799	69,570	0	108,550	0	178,120	1,151	0	1,151	179,271
	2000/2001	0	56,615	78,614	0	135,229	645	50	695	135,924	55,354	0	82,742	0	138,096	2,271	0	2,271	140,367
	5 YEAR TOTAL	80	275,919	371,729	0	647,648	2,786	52	2,838	650,486	291,106	0	391,736	177,637	860,479	5,077	0	5,077	865,556
	5 YEAR AVERAGE	16.0	55,183.8	74,345.8	0.0	129,529.6	557.2	10.4	567.6	130,097.2	58,221.2	0.0	78,347.2	35,527.4	172,095.8	1,015.4	0.0	1,015.4	173,111.2
HAYES RIVER	1996/97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1997/98	0	40	0	0	40	0	0	0	40	0	0	0	0	0	0	0	0	0
	1998/99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1999/2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000/2001	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5 YEAR TOTAL	0	40	0	0	40	0	0	0	40	0	0	0	0	0	0	0	0	0
	5 YEAR AVERAGE	0.0	8.0	0.0	0.0	8.0	0.0	0.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OUTSIDE FOREST SECTION	1996/97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1997/98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1998/99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1999/2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000/2001	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5 YEAR TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5 YEAR AVERAGE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MANITOBA FOREST ZONE	1996/97	2,253	316,994	279,882	5,087	601,963	69,082	489	69,571	671,534	456,308	3,369	284,724	166,576	910,977	464,602	0	464,602	1,375,579
	1997/98	2,526	345,315	278,646	718	624,679	55,010	2,910	57,920	682,599	424,557	2,485	297,718	168,826	893,586	503,103	0	503,103	1,396,689
	1998/99	2,087	348,876	272,268	943	622,087	49,729	2,310	52,039	674,126	507,505	2,146	367,806	53,324	930,781	644,985	150	645,135	1,575,916
	1999/2000	3,106	306,997	277,497	1,627	586,121	41,839	616	42,455	628,576	481,130	5,143	374,619	64,980	925,872	521,409	14,572	535,981	1,461,853
	2000/2001	2,233	313,261	232,848	557	546,666	45,531	2,282	47,813	594,479	508,107	4,836	362,097	48,409	923,449	592,040	10,792	602,832	1,526,281
	5 YEAR TOTAL	12,205	1,631,443	1,341,141	8,932	2,981,516	261,191	8,607	269,798	3,251,314	2,377,607	17,979	1,686,964	502,115	4,584,665	2,726,139	25,514	2,751,653	7,336,318
	5 YEAR AVERAGE	2,441.0	326,288.6	268,228.2	1,786.4	596,303.2	52,238.2	1,721.4	53,959.6	650,262.8	475,521.4	3,595.8	337,392.8	100,423.0	916,933.0	545,227.8	5,102.8	550,330.6	1,467,263.6

Table 5.13: ANNUAL FOREST PRODUCT HARVEST 1996 - 2001 (in cubic metres) Cont'd

FOREST SECTION	YEAR	FUELWOOD GREEN								FUELWOOD					TOTAL		
		SPRUCE	JACK PINE	OTHER SOFT WOOD	TOTAL SOFT WOOD	POPLAR	OTHER HARD WOOD	TOTAL HARD WOOD	TOTAL GREEN FUEL WOOD	FUEL WOOD DRY	SLABS AND TOPS	TOTAL	POSTS AND RAILS	ROUND TIMBER	SOFT WOOD	HARD WOOD	VOLUME HARVEST
ASPEN PARKLAND	1996/97	3	2	0	5	170	10	180	185	342	0	527	0	3	350	180	530
	1997/98	2	2	0	4	3,075	124	3,199	3,203	841	0	4,044	42	40	1,382	3,631	5,013
	1998/99	25	85	0	110	2,205	196	2,401	2,511	0	0	2,511	12	83	545	2,517	3,362
	1999/2000	5	12	5	22	1,735	236	1,971	1,993	0	0	1,993	11	0	1,362	2,199	3,561
	2000/2001	4	0	0	4	1,834	58	1,892	1,896	0	0	1,896	0	0	54	2,062	2,116
	5 YEAR TOTAL	39	101	5	145	9,019	624	9,643	9,788	1,183	0	10,971	65	126	3,993	10,589	14,582
	5 YEAR AVERAGE	7.8	20.2	1.0	29.0	1,803.8	124.8	1,928.6	1,957.6	236.6	0.0	2,194.2	13.0	25.2	798.6	2,117.8	2,916.4
MOUNTAIN	1996/97	1,735	1,721	0	3,456	9,447	4,730	14,177	17,633	8,754	0	26,387	1,648	2,490	321,929	455,151	777,080
	1997/98	0	70	0	70	7,627	2,903	10,530	10,600	12,550	0	23,150	1,653	2,403	362,824	483,253	846,077
	1998/99	1,832	392	464	2,688	4,944	5,115	10,059	12,747	0	0	12,747	4,258	2,250	354,077	631,772	985,849
	1999/2000	1,436	389	505	2,330	4,974	3,754	8,728	11,058	0	0	11,058	14,483	1,672	300,148	493,841	793,989
	2000/2001	1,950	1,156	832	3,938	4,465	4,360	8,825	12,763	0	0	12,763	9,240	3,335	342,795	553,341	896,136
	5 YEAR TOTAL	6,953	3,728	1,801	12,482	31,457	20,862	52,319	64,801	21,304	0	86,105	31,282	12,350	1,681,773	2,617,358	4,299,131
	5 YEAR AVERAGE	1,390.6	745.6	360.2	2,496.4	6,291.4	4,172.4	10,463.8	12,960.2	4,260.8	0.0	17,221.0	6,256.4	2,470.0	336,354.6	523,471.6	859,826.2
PINELAND	1996/97	99	1,136	0	1,235	6,614	2,135	8,749	9,984	4,385	447	14,816	181	378	112,083	58,585	170,668
	1997/98	606	1,166	0	1,774	9,911	3,950	13,861	15,635	11,672	35	27,342	500	285	130,699	76,410	207,109
	1998/99	793	3,078	3,954	7,825	8,604	2,933	11,537	19,362	0	0	19,362	453	425	134,498	75,159	209,657
	1999/2000	654	5,029	3,453	9,136	6,030	2,483	8,513	17,649	0	0	17,649	1,900	323	146,096	87,463	233,559
	2000/2001	815	4,508	4,667	9,990	7,885	3,276	11,161	21,151	0	0	21,151	674	582	143,123	81,026	224,149
	5 YEAR TOTAL	2,967	14,919	12,074	29,960	39,044	14,777	53,821	83,781	16,057	482	100,320	3,708	1,993	666,499	378,643	1,045,142
	5 YEAR AVERAGE	593.4	2,983.8	2,414.8	5,992.0	7,808.8	2,955.4	10,764.2	16,756.2	3,211.4	96.4	20,064.0	741.6	398.6	133,299.8	75,728.6	209,028.4
LAKE WINNIPEG EAST	1996/97	707	1,707	0	2,414	3,900	900	4,806	7,220	5,440	60	12,720	184	10,214	276,176	24,382	300,558
	1997/98	30	251	0	281	1,404	961	2,365	2,646	3,472	0	6,118	3	7,413	206,172	6,314	212,486
	1998/99	90	826	499	1,415	596	768	1,364	2,779	0	0	2,779	10	2,284	191,746	5,700	197,446
	1999/2000	60	767	1,080	1,907	3,509	333	3,842	5,749	0	0	5,749	8	3,109	210,907	11,341	222,248
	2000/2001	134	586	1,193	1,915	1,839	289	2,128	4,043	0	0	4,043	0	138	221,533	10,909	232,442
	5 YEAR TOTAL	1,021	4,139	2,772	7,932	11,254	3,251	14,505	22,437	8,912	60	31,409	205	23,156	1,106,534	58,646	1,165,180
	5 YEAR AVERAGE	204.2	827.8	554.4	1,586.4	2,250.8	650.2	2,901.0	4,487.4	1,782.4	12.0	6,281.8	41.0	4,631.6	221,306.8	11,729.2	233,036.0
INTERLAKE	1996/97	337	1,359	0	1,696	6,298	354	6,652	8,348	7,091	0	15,439	83	699	70,863	21,154	92,017
	1997/98	79	328	0	407	4,009	203	4,212	4,619	5,343	13	9,975	425	363	139,659	7,512	147,171
	1998/99	772	1,221	581	2,574	4,766	387	5,153	7,727	0	0	7,727	6,134	228	140,279	10,186	150,465
	1999/2000	386	957	449	1,792	2,712	204	2,916	4,708	0	0	4,708	210	696	110,201	7,388	117,589
	2000/2001	358	835	219	1,412	2,914	319	3,233	4,645	0	0	4,645	75	320	56,654	9,863	66,517
	5 YEAR TOTAL	1,932	4,700	1,249	7,881	20,699	1,467	22,166	30,047	12,434	13	42,494	6,927	2,306	517,656	56,103	573,759
	5 YEAR AVERAGE	386.4	940.0	249.8	1,576.2	4,139.8	293.4	4,433.2	6,009.4	2,486.8	2.6	8,498.8	1,385.4	461.2	103,531.2	11,220.6	114,751.8
SASKATCHEWAN RIVER	1996/97	162	53	0	215	1,299	362	1,661	1,876	1,242	8	3,126	0	0	188,348	4,860	193,208
	1997/98	276	51	0	327	639	823	1,462	1,789	1,630	0	3,419	6	1	247,118	19,076	266,194
	1998/99	322	220	18	560	1,189	780	1,969	2,529	0	0	2,529	16	13	237,412	2,894	240,306
	1999/2000	351	241	8	600	4,686	290	4,978	5,578	0	0	5,578	2	0	275,023	5,446	280,469
	2000/2001	342	183	0	525	90	382	472	997	0	0	997	0	0	269,710	17,106	286,816
	5 YEAR TOTAL	1,453	748	26	2,227	7,905	2,637	10,542	12,769	2,872	8	15,649	24	14	1,217,611	49,382	1,266,993
	5 YEAR AVERAGE	290.6	149.6	5.2	445.4	1,581.0	527.4	2,108.4	2,553.8	574.4	1.6	3,129.8	4.8	2.8	243,522.2	9,876.4	253,398.6

Table B13: ANNUAL FOREST PRODUCT HARVEST 1996 - 2001 (in cubic metres) Cont'd

FOREST SECTION	YEAR	FUELWOOD GREEN								FUEL WOOD DRY	SLABS AND TOPS	FUELWOOD TOTAL	POSTS AND RAILS	ROUND TIMBER	TOTAL		
		SPRUCE	JACK PINE	OTHER SOFT WOOD	TOTAL SOFT WOOD	POPLAR	OTHER HARD WOOD	TOTAL HARD WOOD	TOTAL GREEN FUEL WOOD						SOFT WOOD	HARD WOOD	VOLUME HARVEST
HIGHROCK	1996/97	237	78	0	315	1,901	529	2,430	2,745	1,818	12	4,575	0	0	275,569	7,111	282,680
	1997/98	40	39	0	79	160	131	291	370	1,680	0	2,050	0	17	248,557	291	248,848
	1998/99	1,019	612	40	1,671	144	62	206	1,877	0	0	1,877	0	0	189,138	231	189,369
	1999/2000	501	522	15	1,038	142	18	160	1,198	0	0	1,198	0	2	157,273	164	157,437
	2000/2001	754	780	0	1,534	130	60	190	1,724	0	0	1,724	0	10	185,293	1,273	186,566
	5 YEAR TOTAL	2,551	2,031	55	4,637	2,477	800	3,277	7,914	3,498	12	11,424	0	29	1,055,830	9,070	1,064,900
	5 YEAR AVERAGE	510.2	406.2	11.0	927.4	495.4	160.0	655.4	1,582.8	699.6	2.4	2,284.8	0.0	5.8	211,166.0	1,814.0	212,980.0
CHURCHILL RIVER	1996/97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1997/98	42	94	0	136	95	0	95	231	1,136	0	1,367	0	0	1,272	95	1,367
	1998/99	526	1,256	181	1,965	70	16	86	2,051	0	0	2,051	0	0	1,993	104	2,097
	1999/2000	400	1,158	22	1,580	8	12	20	1,600	0	0	1,600	0	0	12,636	20	12,656
	2000/2001	420	940	12	1,372	52	22	74	1,446	0	0	1,446	3	0	12,695	74	12,769
	5 YEAR TOTAL	1,390	3,448	215	5,053	225	50	275	5,328	1,136	0	6,464	3	0	28,596	293	28,889
	5 YEAR AVERAGE	278.0	689.6	43.0	1,010.6	45.0	10.0	55.0	1,065.6	227.2	0.0	1,292.8	0.6	0.0	5,719.2	58.6	5,777.8
NELSON RIVER	1996/97	492	457	0	949	839	45	884	1,833	5,314	0	7,147	19	24	326,743	2,289	331,032
	1997/98	418	149	0	567	368	65	433	1,000	4,558	0	5,558	0	209	240,477	889	241,366
	1998/99	1,856	1,458	0	3,314	935	82	1,017	4,331	0	0	4,331	5	6	341,179	2,403	343,582
	1999/2000	2,418	1,910	65	4,393	1,182	338	1,520	5,913	0	0	5,913	0	2,381	346,142	3,222	349,364
	2000/2001	1,953	1,496	5	3,454	372	80	452	3,906	0	0	3,906	0	235	277,014	3,418	280,432
	5 YEAR TOTAL	7,137	5,470	70	12,677	3,696	610	4,306	16,983	9,872	0	26,855	24	2,855	1,533,555	12,221	1,545,776
	5 YEAR AVERAGE	1,427.4	1,094.0	14.0	2,535.4	739.2	122.0	861.2	3,396.6	1,974.4	0.0	5,371.0	4.8	571.0	306,711.0	2,444.2	309,155.2
HAYES RIVER	1996/97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1997/98	0	0	0	0	0	0	0	0	128	0	128	0	0	168	0	168
	1998/99	0	0	0	0	0	0	0	0	0	0	0	0	168	168	0	168
	1999/2000	0	0	0	0	0	0	0	0	0	0	0	0	38	38	0	38
	2000/2001	0	0	0	0	0	0	0	0	0	0	0	0	182	182	0	182
	5 YEAR TOTAL	0	0	0	0	0	0	0	0	128	0	128	0	388	556	0	556
	5 YEAR AVERAGE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.6	0.0	25.6	0.0	77.6	111.2	0.0	111.2
OUTSIDE FOREST SECTION	1996/97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1997/98	83	63	0	146	13	0	13	159	163	0	322	0	30	339	13	352
	1998/99	90	35	162	287	0	0	0	287	0	0	287	0	0	287	0	287
	1999/2000	192	96	0	288	0	0	0	288	0	0	288	0	0	288	0	288
	2000/2001	298	45	8	351	0	0	0	351	0	0	351	0	10	361	0	361
	5 YEAR TOTAL	663	239	170	1,072	13	0	13	1,085	163	0	1,248	0	40	1,275	13	1,288
	5 YEAR AVERAGE	132.6	47.8	34.0	214.4	2.6	0.0	2.6	217.0	32.6	0.0	249.6	0.0	8.0	255.0	2.6	257.6
MANITOBA FOREST ZONE	1996/97	3,772	6,513	0	10,285	30,474	9,065	39,539	49,824	34,366	527	84,737	2,115	13,508	1,574,061	573,712	2,147,773
	1997/98	1,576	2,215	0	3,791	27,301	9,160	36,461	40,252	43,173	48	83,473	2,629	10,761	1,578,667	597,484	2,176,151
	1998/99	7,327	9,183	5,899	22,409	23,453	10,339	33,792	56,201	0	0	56,201	10,886	5,457	1,591,622	730,966	2,322,588
	1999/2000	6,403	11,081	5,602	23,086	24,980	7,668	32,648	55,734	0	0	55,734	16,814	8,421	1,560,114	611,084	2,171,198
	2000/2001	7,028	10,531	6,936	24,495	19,581	8,846	28,427	52,922	0	0	52,922	9,992	4,812	1,509,414	679,072	2,188,486
	5 YEAR TOTAL	26,106	39,523	18,437	84,066	125,789	45,078	170,867	254,933	77,559	575	333,067	42,238	43,259	7,813,878	3,192,318	11,006,196
	5 YEAR AVERAGE	5,221.2	7,904.6	3,687.4	16,813.2	25,157.8	9,015.6	34,173.4	50,986.6	15,511.8	115.0	66,613.4	8,447.6	8,651.8	1,562,775.6	638,463.6	2,201,239.2